

**The Changing Landscape of Financial Services in Manitoba: A Location Analysis of
Payday Lenders, Banks and Credit Unions**

by

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A Thesis submitted to the Faculty of Graduate Studies of

The University of Manitoba

in partial fulfillment of the requirements of the degree of

DOCTOR OF PHILOSOPHY

Individual Interdisciplinary Program

University of Manitoba

Winnipeg

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ABSTRACT

This study traces the emergence and expansion of payday lending outlets in Winnipeg and the rural Manitoba communities of Brandon, Portage la Prairie, Thompson and Dauphin during the period 1980-2009, in order to look for shifts over time in the site location strategies of payday lenders relative to mainstream banks. Location analysis, in the context of financial exclusion theory, is used to examine the spatial void hypothesis that mainstream banks have played a role in the rise of payday lending in poor neighbourhoods where traditional bank branches are absent or under-represented. It also considers evidence for the spatial complement hypothesis that payday lenders are not geographic substitutes for mainstream banks but are instead spatial complements, serving different segments of shared markets. Results of the goodness-of-fit test and location analysis based on population data suggest that the payday lending industry in Manitoba is not exclusively located in lower income neighbourhoods or solely located in areas where there is an absence or reduced presence of bank and credit union branches. Moreover, newer, suburban and rural payday lender outlets are almost always located next to mainstream banks and credit unions. The exception would be Winnipeg's inner-city, where payday lenders are more densely located and where mainstream banks have gradually retreated.

While multi-service establishments are shown to have first gained a foothold in poor neighbourhoods as cheque-cashers, this study examines the extent to which a focus on payday

loans as the lead product has been accompanied by a shift to middle-income, suburban neighbourhoods and rural communities over the study period. The results of descriptive and OLS multivariate regression analyses provide further evidence of the changing relationship of location patterns of payday lenders to neighborhood characteristics, including mainstream bank presence, income level, poverty status, population density, age, education, family type and ethnicity. The implications these findings have for ongoing policy discussions about the status of the payday loan industry in Canada are discussed.

JEL Classification code: G21 - Banks; Other Depository Institutions; Microfinance Institutions; Mortgages

ACKNOWLEDGEMENTS

This thesis represents the valued contributions of the many people who supported my work over the last several years. I would like to express my gratitude to all who took an interest and generously volunteered their time and effort in support of this project.

I am especially grateful to my dissertation committee: Sarath Abeysekera, Jerry Buckland, Karen Duncan and Bill Notz. I want to thank Sarath Abeysekera, my committee chair, for his leadership, wisdom and counsel throughout the dissertation process. I am grateful for the experience and thoughtful insights of Jerry Buckland, whose own work has been a key source of inspiration for this research. I thank Karen Duncan for her thorough reviews and valuable input during various stages of the research project. I also wish to extend my sincere appreciation to Bill Notz for his enthusiastic support and encouragement, which helped see this project through to completion.

I must extend my special thanks to all who made important contributions to the development of the dissertation and made themselves readily available for questions, advice and technical support: Brian McGregor, Wayne Simpson, David Walker, Mashiur Rahman, Coralee Buckley and Gabrielle Leo.

Finally, I would like to acknowledge my family for their patience, support and understanding during the pursuit of this research. I deeply appreciate their faith and encouragement now and always.

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Figures from “The Changing Structure of Inner-city Retail Banking: Examining Bank Branch and Payday Loan Outlet Locations in Winnipeg, 1980-2009,” by M. Brennan, B. McGregor, and J. Buckland, 2011, *Canadian Journal of Urban Research* 20(1), p. 1-32. Copyright 2011 by the Institute of Urban Studies. Reprinted with Permission. Permission granted February 28, 2012.

CHAPTER 1: THE PROBLEM

1.1 INTRODUCTION

What accounts for the rapid growth in the number of non-bank lenders that offer small, short-term, high interest loans to low and modest-income working people short of cash between paydays? This question has generated a small but growing body of research in the United States dating back to the early 1990s and has yielded useful insights for government policymakers, regulators and consumers while broadening the field of study around a sector of the economy that is of growing importance. Research in Canada is only now beginning to develop, originating with Ramsay's (2000) study of the alternative credit market in which industry fees and practices were analysed along with implications for vulnerable consumers. Since then, the few Canadian studies that have emerged mainly focused on challenging public policy to ensure the needs of the working poor are met in a less costly way (Buckland & Dong, 2008; Buckland & Martin, 2005; Robinson, 2006), to regulate unfair practices effectively (Aitken, 2006; Buckland, Robinson, Carter, Simpson, Friesen, & Osborne, 2007) and to ensure that consumers of payday loans receive a level of protection comparable to middle income consumers (Ramsay, 2001).

Payday lenders are a form of fringe bank, along with pawnshops, cheque-cashers, and rent-to-own firms that together offer a range of basic financial services best known for their easy accessibility to people with limited economic means. Prior to the development of the payday loan, some of these firms, such as National Money Mart Inc.,¹ were primarily involved in services used by low-income persons without a bank relationship to conduct essential

¹ Money Mart is the brand name for the National Money Mart Cheque Cashing Company, which is a wholly-owned subsidiary of Pennsylvania-based Dollar Financial Group Inc.

transactions such as cheque-cashing, bill payments and wire transfer; the fees for which are high relative to those offered by traditional financial institutions. Payday lenders began offering small-sum, short-term loans in Canada sometime in the late 1990s and the number of firms, and particularly outlets rose rapidly in the 2000s, so that there are now over 1,400 storefronts across the country (Buckland, 2012). In exchange for quick cash loans, borrowers pledge their next paycheque to cover the principal plus fees and interest. The process is fast and efficient but comes at a steep price. When converted into an annualized interest rate, the cost of such loans easily exceeds usury thresholds and has raised concerns that payday lenders prey on the financially illiterate, especially those with few assets or without sound credit histories who can least afford the added expense (Barr, 2004; Ramsay, 2000; Stegman & Faris, 2003; Squires & O'Connor, 2001).

Growing public interest has resulted in attempts to understand the causes of the industry's phenomenal growth, its role within the financial system and its relationship to the established network of bank branches. Most studies approach these questions by examining the location decisions of payday lenders relative to mainstream banks in search of a connection. The term "mainstream bank" is used here to refer to federally or provincially regulated, deposit-taking institutions such as banks, credit unions, caisses populaires and trust companies. These studies take an institutional perspective that assumes structures and processes embedded in locales, markets and policies are a factor in the delivery of financial services (Buckland, 2012). Therefore, the institutional context in which fringe and mainstream banks and consumers operate is considered important. For the purpose of these studies, "institutions" is a term used to refer to rules and norms as reflected in government regulation of the financial services industry, public

policy regarding access to basic banking services and industry practices regarding branch location. Here, researchers concentrate on the challenges of geographic access to fully-regulated depository institutions by residents of low-income neighbourhoods, concerns about the potential for exclusion from the benefits of full participation in the financial market and the implications of uneven economic development (Buckland & Martin, 2005; Buckland, Martin, Curran, McDonald & Reimer, 2003; Caskey, 1994; Dymski & Veitch, 1996; Graves, 2003; Leyshon & Pollard, 2000; Leyshon & Thrift, 1995; Sherraden & Barr, 2005).

To the degree that payday lenders fill a spatial void in the absence of traditional bank branches, they are often presumed to serve the market as substitutes. The spatial void hypothesis (Smith, Smith, & Wackes, 2008) contends that non-bank financial service providers are substitutes for mainstream banks in geographic areas where traditional bank branches are absent or under-represented in proportion to the local population. However, researchers focused on supply side factors of the payday loan market are beginning to show interest in the question of spatial complementarity rather than substitution as new findings suggest payday lenders are not always located in geographic isolation of banks. The spatial complement hypothesis (Cover, Fowler, Kleit, & Russo, 2009) proposes that non-bank financial service providers and traditional financial institutions are not substitutes for one another, but instead serve different segments of the market in which they are situated. Each appeal to a unique subset of the market for financial services and location decisions are made independently of each other (Burkey & Simkins, 2004; Damar, 2009; Temkin & Sawyer, 2004). The role of the state is emphasized under both hypotheses, often in the form of policy intervention, consumer protection measures and

regulation of institutions to correct market inefficiencies or power imbalances thought to contribute to the problem of financial exclusion.

Whatever the characterization, it is clear that the market for the industry's product has continued to expand. Yet few studies have examined the long-term location patterns of payday lenders relative to mainstream banks for evidence of a corresponding shift in market strategy (Damar, 2009). Attempts are often limited to a year's worth of sample data for a single market due to the challenges of assembling the required information (Fellowes & Mabanta, 2008). Depending on the purpose, a snapshot of the industry's geographic distribution at a single point in time is useful. However, a longitudinal study that chronicles the emergence and expansion of the industry in a specified region is likely to reveal nuances that would otherwise go undetected in a static portrayal of spatial patterns. Results may offer new insights as to the current and future direction of the payday lender sector and its relationship to the established financial services network.

1.2 RESEARCH QUESTIONS

Research questions will set out to explore the theoretical perspective that payday lenders are a sub-phenomenon of a two-tier or segmented banking system. Bank segmentation is the situation of different types of banks (fringe and mainstream) attending to particular types of consumers and neighbourhoods based on socioeconomic factors. Critics argue that segmentation strategies can encourage financial exclusion: processes whereby some people are left without access, or inadequate access, to mainstream bank branch services. There is the potential for

payday loan consumers facing limited options to become and remain detached from mainstream providers of more actively managed credit, deposit and insurance services. The implication is that, over time, more Canadian households may be subject to a form of financial exclusion due to isolation from expanded services and professional financial advice.

On the other hand, if payday lender outlets are observed in markets outside poor, unbanked neighbourhoods, such as middle-income suburban areas in close proximity to bank branches, then there may be some basis to the argument that the industry occupies a niche role within the overall sector. Some consideration is given to the perspective that the payday loan industry has evolved in response to growing demand since its arrival, providing more, rather than fewer credit options for consumers across all socioeconomic strata. Proponents of this view argue that payday lenders offer a competitive advantage over traditional financial institutions for consumers that need cash in a hurry and who are willing to pay a premium for the specialized service.

Although the study will not settle the debate as to whether the payday loan industry opportunistically preys on the poor or is merely a niche lender responding to growing demand for its distinct service, it will provide evidence of the industry's changing relationship to the physical network of mainstream financial services and other location determinants that are important to public discourse and policy discussions. More specifically, the research study has three principal questions that it aims to address:

- 1) What are the geographic location patterns of the payday lending sector and the network of mainstream bank branches in the province of Manitoba, and how have they varied over time?

- 2) Is there empirical support for the claim that payday lenders concentrate in poorer neighborhoods in the absence of mainstream bank branches as compared to well-banked, above average-income neighborhoods?
- 3) To what extent do neighborhood demographic and socioeconomic characteristics explain the distribution of payday lender outlets and mainstream bank branches?

The research provides an elaboration and extension of local studies (Buckland et al., 2003; Buckland & Martin, 2005) that examined the rise of fringe (or alternative) financial services in Winnipeg's North End, an impoverished neighbourhood with a declining population. Although payday lenders appear to have gained entry in the inner city, this project will investigate whether and to what extent there has been a shift to other areas of the city and province over the study period.

1.3 RELEVANCE

The objective of this research is to provide an analysis of the site-location pattern of payday lenders in the province of Manitoba and how it has changed over time relative to the presence of banks and credit union branches. Because most location studies related to financial exclusion provide a one-time snapshot of the geographic distribution of branches and outlets, researchers are not able to fully capture the dynamics of historical or developing spatial relationships as part of an overall trend across the sector. Accordingly, this study is aimed at filling the gap in financial exclusion research on the payday loan industry in Canada by

integrating longitudinal data obtained for the city of Winnipeg and four rural centres throughout the Province of Manitoba: Brandon, Portage la Prairie, Dauphin and Thompson. It will explore whether payday lenders are more prevalent in lower-income neighbourhoods with few mainstream banks and whether demographic and socioeconomic factors associated with demand for the service are related to the characteristics of areas in which outlets are found.

The location of fringe and mainstream banks has been of particular interest in the US and UK literature, but little evidence has been compiled in Canada. This study provides data and analysis that begins to address this gap in the literature.

1.4. OUTLINE OF THESIS

The thesis proceeds as follows. The relevant literature is reviewed in Chapter 2, beginning with key theories used to explain financial exclusion based on differing assumptions relating to human rationality and the role of institutions (Buckland, 2012). The chief actors identified in the institutional approach chosen for this spatial study include bank consumers, banks and the state, with a particular focus on the role of payday lenders within the financial services sector. As such, the literature review also provides an industry background that demonstrates how changing supply and demand conditions have contributed to its evolution within the current regulatory environment. In Chapter 3, the research methodology is described and hypotheses are developed regarding the spatial relationships of payday lenders, banks and credit unions relative to each other and to demographic and socioeconomic factors influencing location. Next, results of tests used to analyze the data, including Pearson's chi-square goodness-of-fit, distance band,

descriptive and OLS multiple regression analyses are reported in Chapter 4, followed by discussion and conclusions of the study in Chapter 5.

CHAPTER 2: LITERATURE REVIEW

2.1 THEORETICAL FRAMEWORK

2.1.1 Financial Exclusion Theory

i. Definition of financial exclusion

The problem of financial exclusion has many dimensions and can be described as a state as well as a process. While there are many definitions of the term, it is broadly understood as the inability (however brought about) of some individuals or societal groups to access the financial system. The financial system in this case refers to formal or “mainstream banks,” a term used here to refer to federally, provincially or state regulated deposit-taking institutions such as banks, credit unions, caisses populaires and trust companies. Mainstream financial institutions dominate the provision of retail banking services in Canada. Five very large banks control the majority of the retail market. These institutions are Canadian-owned corporations that operate throughout the country with extensive branch and automatic teller machine (ATM) networks. Credit unions are provincially-regulated and operate within a province. They are member-owned cooperatives with roots in various ethnic, economic and regional communities. Mainstream banks are full-service providers; that is, they not only provide consumers with the ability to carry out essential transactions through chequing accounts, debit cards, money wiring and cheque-cashing services, but they also allow consumers to build credit histories through short- and long-term borrowing for planned or unplanned expenditures as well as to save or invest for the future. Taken together, financial services offer the means to achieve or enhance well-being.

Individuals or households without access to financial services face many obstacles that prevent them from achieving or enhancing well-being. Inevitably, the poor and underprivileged are more likely to be unbanked or underbanked (Buckland & Dong, 2008; Caskey, 1994) with a heavier reliance on informal networks or semi-formal institutions or “fringe banks”, which refers to the range of financial services that target low-income consumers and/or individuals with damaged or weak credit histories experiencing financial hardship. Services are expensive relative to those offered by mainstream banks and provide no means of establishing or repairing a credit history, nor do they offer savings instruments or deposit services.² Examples of fringe services include cheque-cashing, payday loans, pawnbrokers and rent-to-own stores. Fringe banks operate on the periphery of the formal financial system, face relatively few regulatory constraints and are considered semi-formal for that reason. The “informal financial network” refers to credit and other services that may be available through friends, family and neighbourhood shops.

The term “unbanked” means not having any type of account with a mainstream financial institution. Therefore, those without an active deposit account at a traditional bank are said to be financially excluded (Buckland & Dong, 2008). An account is considered inactive or dormant if it has not been used for six months or more. According to the MacKay Report (Task Force Report on the Future of the Canadian Financial Services Sector, 1998), three percent of Canadian adults (18 years of age and older) and eight percent of Canadian adults with household incomes

² One exception that will be discussed in more detail in Section 2 of the literature review is Cash Store Financial, a Canadian company that in the third quarter of 2010 introduced a basic deposit account product through an agency agreement with DirectCash Bank (DC Bank), a federally regulated Schedule 1 bank. Schedule 1 banks are allowed to accept deposits and are not subsidiaries of a foreign bank.

less than \$25,000 have no bank account, although it has been argued that the estimate is too low.³ This figure is comparable to the level of financial exclusion in the United Kingdom, which is estimated to be between six and nine percent (Her Majesty's Treasury, 2004; Rogaly, Fisher, & Mayo, 1999). The level of financial exclusion in the UK and US is similar; higher than Canada, France and Germany (as cited in Buckland & Dong, 2008, p.253).

The term "underbanked" is less precisely defined, but generally refers to only occasional use of a bank account or to limited access to mainstream financial services (Simpson & Buckland, 2009). Under these conditions, consumers may be using a variety of strategies to conduct their banking, perhaps only using a traditional bank account once in awhile and relying on fringe banks or other sources when some immediate need arises. Because there are no concrete measures or survey data available,⁴ it is unknown how many Canadians would be considered underbanked, but one study in the UK suggests that as much as 20 percent of its population has no more than one or two conventional bank products, on top of the number that don't have any bank products at all (Financial Services Authority, 2000 as cited in Devlin, 2005 p. 78).

The topic of financial exclusion as a state is often linked to that of social exclusion. Those who lack access to basic financial services are also more likely to be excluded in other ways, so

³ The figures quoted are challenged by Buckland and Dong (2008), who point out that the telephone survey used for the MacKay Report and other polls may under represent the financially excluded who are more likely to be poor and less likely to have a telephone. The authors cite the 1999 Survey on Financial Security (Statistics Canada, 1999) which found that 13 percent of its respondents were without a bank account with a nonzero balance.

⁴ The Statistics Canada 2005 Survey of Financial Security (SFS) may offer the potential to generate an indication of the number of underbanked in Canada through types of financial services used and credit options available reported by households.

financial exclusion reinforces and perpetuates other aspects of social exclusion.⁵ Social exclusion “is a broader concept than poverty, encompassing not only low material means but the inability to participate effectively in economic, social, political and cultural life, and in some characterizations, alienation and distance from mainstream society” (Duffy, 1995, as cited in Ramsay, 2000 p. 25).

Treatments of the topic that focus on the processes or mechanisms leading to financial exclusion suggest financial deregulation has aggravated the problem, arguing that the subsequent drive by the industry to reduce unnecessary costs and boost profits has led to a bifurcation of the market (Caskey, 1994; Dymski & Veitch, 1996; Leyshon & Pollard, 2000). For example, Leyshon and Thrift (1995) examine what the financial services industry describes as a “flight to quality”; that is, a search for “safer” markets, a process which tends to discriminate in favour of more affluent and powerful social groups and against poor and disadvantaged groups. Such groups or individuals are thought to represent unacceptable risk or expense, and as such are undesirable prospects. Mainstream banks are said to respond by moving out of neighbourhoods where a larger percentage of low-income people live, affecting residents and the economic viability of the community itself.

⁵ In Canada, the Financial Services White Paper (Finance Canada, 1999) connects financial exclusion to citizenship and equality of opportunity:

Promoting equitable access for the less well off, for seniors and for people with disabilities is an important public policy objective (and) ensuring that all Canadians have access to basic financial services is an issue of fundamental significance to government... Without an account to make electronic payments or write cheques, an individual’s ability to participate in the economic mainstream is restricted. (p. 47).

ii. Types of theories applied to the study of financial exclusion

The study of financial exclusion is early in its development but has captured the interest of scholars from a wide variety of disciplines, including economics, sociology, psychology, and geography. Although research has been underway in the US and UK since the 1990s (Caskey, 1994; Dymski & Veitch, 1996; Leyshon & Thrift, 1995), the first study in Canada does not appear until 2000 (Ramsay, 2000). Much of the existing research on the topic is intended to inform government policy decisions with respect to regulation and consumer protection. As such, the literature is fairly polarized. That is, it collects itself around the debate among advocacy groups for poor or vulnerable consumers calling for regulatory intervention and those representing industry interests of minimally or self-regulated markets. These perspectives can be evaluated and categorized according to key assumptions that relate to human rationality and the role of institutions (Buckland, 2012).

According to Buckland's typology, factors to be considered when evaluating major assumptions behind theories of financial exclusion are rational choice, irrational or rationally-bounded individual behaviour, and structural barriers. The framework identifies four types of theories used to explain financial exclusion. Each type and their particular application to the payday loan market will be summarized here. Emphasis is placed on the rational/institutional category where most academic literature related to financial exclusion is located.

a. Rational/a-institutional theory

The term "a-institutional" is used to refer to theories that do not incorporate the role of social and economic institutions into their analysis. Neoclassic economic theory holds that individual agents exercise rational choice within a market-centric, institution-less environment.

As the market for a particular good or service reaches equilibrium, consumers can be assured that they are receiving the best prices possible and producers can be assured they are receiving a fair return for their output. Modern-day political ideology rests on neoclassical theory that dates back to the 18th century, when Adam Smith (1776) argued that business owners, in the pursuit of profit, will ultimately produce the greatest social good because of the invisible hand of the marketplace. Neoliberalism is a policy regime guided by the core belief that unimpeded markets are the most efficient means to the common good; thus the role of the state is secondary to that of the market.

Under the assumptions of neoclassical economic theory, payday loan companies are meeting the otherwise unmet demand of a specific segment of the population. To the extent that mainstream banks are unable or unwilling to offer small-sum, short-term loans for high-risk borrowers, payday lenders are viewed as having a competitive advantage from the perspective of the rational consumer. Research supporting this perspective finds that payday loan use is based on an informed, cost-benefit calculation (Elliehausen, 2006; Elliehausen & Lawrence, 2001), and any attempts at regulatory intervention of the industry have negative effects on consumer well-being (Morgan & Strain, 2007). Producers are assumed to be operating efficiently and, as part of a well-functioning, perfectly competitive market, passing on justifiable costs to their customers (Flannery & Somolyk, 2005).

The theory assumes efficient markets and by extension, financial exclusion is a personal choice or is caused by government policy that interferes with the smooth operation of markets, creating distortions that lead to exclusion. However, the implications of an oligopolistic market where one or just a few large producers can have a significant impact on prices and competitors,

as in the case of mainstream banks and payday lenders, challenges the theory's perfectly competitive market assumption.⁶

b. Non-rational/a-institutional theory

Behavioral economics relaxes assumptions about human rationality embedded in neoclassical economic theory. Mullainathan and Thaler (2001) challenge the belief that people are perfectly rational and always act in their short and long-term interests by arguing that human rationality is much more nuanced. Self control, will power, over-confidence, loss aversion and reaction to different methods of framing or presenting information are factors that can sometimes lead people to make decisions that may not appear rational (Shefrin & Thaler, 1981). Under these conditions, some consumers may be choosing a payday loan over a conventional bank loan when it is not in their best interest to do so.

Rather than markets functioning for the mutual benefit of both participants, the concept of a rationally bounded consumer changes the fundamental nature of this relationship; that is, at times the consumer may be operating at a relative disadvantage. Therefore, financial exclusion results from individuals making a series of uninformed decisions that ultimately affect their ability to fully participate in the financial mainstream.

c. Non-rational/institutional theory

Another perspective, known as the institutional theory of savings, is based on institutional and behavioural theory (Sherraden & Barr, 2005). It holds that bounded rationality of consumers and structural barriers of mainstream banks can promote financial exclusion. The theory rejects

⁶ In Canada, the payday loan industry is highly concentrated, dominated by three major players: Money Mart, Cash Store Financial Services Inc. and Cash Money. As well, Canada's banking industry is dominated by five major players. For a more detailed discussion of the industry as imperfectly competitive, see Buckland, Carter, Simpson, Friesen, and Osborne (2007), p. 40.

the neoclassical assumption that all economic classes operate within frictionless markets, as well as some of its assumptions about human rationality. Although it assumes that poor people and non-poor people are alike in terms of their savings motives and goals, their actions are mediated by the social and institutional settings in which they find themselves.⁷ The theory is useful in terms of highlighting how institutions such as employers, government programs, schools and financial service providers can play a greater role in promoting financial inclusion but limits its analysis to a single dimension: savings behaviour.

d. Rational/institutional theory

In contrast to frictionless market theories, a variety of theories related to financial exclusion claim mainstream banks work to actively discourage certain societal groups from using their services, creating obstacles for rational consumers who would otherwise choose to deal with them. These theories take groups such as organizations and class, rather than single firms, individuals or households, as the object of study and include new institutional economics (Ostrom, 1990), demand and supply theory (Caskey, 1994), and political-economy (Aitkin, 2006; Dymski & Veitch, 1996; Leyshon & Pollard, 2000; Leyshon & Thrift, 1995).

Approaches based on new institutional economics and social and political institutional theories provide analyses of how different forms of community-based credit throughout history and in various parts of the world may have direct application to contemporary problems of financial exclusion (Bouman, 1995; Buckland, Hamilton, & Reimer, 2006; Johnson & Rogaly,

⁷ Savings behaviour among low-income people is found to be a function of seven key constructs: access, information, incentives, facilitation, expectations, restrictions and security. These constructs manifest different behaviors depending on the degree to which people are exposed to or enabled by them in their immediate environment or by the institutions with which they interact.

1999). The role of institutions in leveraging the success of micro-credit, for example, is emphasized in this literature.

Other research efforts focus on the macro-level processes leading to financial exclusion. One important example is found in the demand and supply side analysis used in Caskey's (1994) landmark study, which demonstrates how broad structural factors in the US economy have combined to produce the growth in fringe banks and a corresponding increase in the problem of financial exclusion. On the demand side, an increasing need for easy credit is driven in part by stagnating incomes, overindebtedness and lower savings rates among low and modest income consumers. On the supply side, factors contributing to the increase in financial exclusion include the introduction of higher fees on deposit accounts, the withdrawal of mainstream banks from the small-sum, short-term credit market, the retreat of traditional bank branches from poor neighbourhoods and the increased interest of owners and investors in the less-regulated business of fringe banking. Although Caskey's work provides many important insights into factors thought to have an influence on financial exclusion in the US, political economists provide even broader context for these changes in terms of the global impact of financial service deregulation.

Researchers using the political-economy approach to financial exclusion chronicle a series of economic events during the 1970s associated with stagflation and the accumulation of international debt that conservative governments of the time (Thatcher in the UK and Reagan in the US) sought to remedy. Monetary policy which focused on reducing pressure on prices ultimately led to deregulation of labour markets and financial services. Political economists argue that financial service deregulation has caused greater competition among banks to reduce costs and increase profits, the result of which has been a reduction in supply of mainstream bank

services for low-income people (Leyshon & Pollard, 2000). According to this perspective, the result is a two-tiered financial system that benefits those with wealth and power but exacerbates the problems associated with poverty and inequality (Aitken, 2006; Dymski & Veitch, 1996). Political-economy theories bring context to the financial exclusion literature surrounding changing supply conditions of mainstream banks, although its emphasis on power and the role of the state means that the significance of other actors, including individuals and communities, can be under-emphasized.

iii. Rational/institutional theory and the spatial void hypothesis

Financial exclusion studies carried out from the rational/institutional perspective have identified a number of factors that influence an individual's decision to use a certain type of financial service. One major factor is convenience and this includes proximity to a branch. Typically, researchers have focused on case studies to consider whether different varieties of bank branches are equally convenient across neighbourhood income levels. The location question is important because of the widely held belief that lack of bank branches in poor neighbourhoods has contributed to the emergence and growth of fringe banks.

Location analyses carried out over the last two decades examine how the geographic redistribution of mainstream bank services affects low-income communities and their residents. Accordingly, these studies are designed to test the spatial void hypothesis that mainstream banks are more densely located in more affluent neighbourhoods compared to poor neighbourhoods, or that fringe banks are more densely located in poor neighbourhoods compared to affluent neighbourhoods. Studies cover a variety of geographic regions, most often cities or counties but occasionally individual states and, in a few cases, the entire country. A common approach is to

compare social and economic characteristics of the areas where fringe banks are located to other areas, or to areas more densely populated by banks. Factors frequently considered include income, race and level of education, although some have also looked at other factors thought to influence location decisions, such as regulatory schemes and creditworthiness of the surrounding population. A review of major location studies integrating the spatial void hypothesis in the financial exclusion literature is provided in the appendix.

Location studies generally lend empirical support to the claim that fringe banks are more densely located and mainstream banks less densely located in poorer neighbourhoods. For instance, Caskey's (1994) study showed that bank branch closures in five US cities (Atlanta, Denver, New York, San Jose, and Washington DC) over the years 1970, 1980 and 1989 were disproportionately high in low income neighbourhoods in all but one city (San Jose). Caskey links the growth of the cheque-cashing industry beginning in the late 1970s to deregulation of banks that affected the availability of bank branches and no-cost bank accounts. At the time of his original work, payday lenders had not yet entered the market. Caskey (2002) would later address payday lenders as an outgrowth of the cheque-cashing industry and the fastest growing segment of the fringe bank sector.

Graves (2003) analyzes the site-location decisions of payday lenders relative to banks in seven parishes in Louisiana and in Cook County, Illinois. The study compares the ethnicity and income characteristics of census block groups that have payday lenders to those that have bank branches using a difference of means t-test. Results suggest that the payday lenders are located in neighbourhoods with a higher percentage of poor and minority residents. They further suggest

that banks are withdrawing from these same neighbourhoods in favour of those that are whiter and wealthier than average. The Graves study is one of the first to isolate payday lenders from other fringe banks in performing a point-in-time spatial analysis, drawing attention to the unique characteristics of this particular industry.

Other researchers since then have used Zip Code Tabulation Area (ZCTA) level data to examine the determinants of the locations of payday lenders. Burkey and Simkins (2004) use ZCTA level data for 2000 to look at the determinants of the locations of payday lenders and bank branches in North Carolina. The findings are consistent with the claim that payday lenders are more dominant than banks in areas characterized by lower incomes, higher minority and younger, less educated populations. However, the authors do find evidence that banks and payday lenders are co-located in many instances. Damar (2009) also employs ZCTA-level data to focus exclusively on the entry of new payday lender outlets in Oregon during the period 2002-2004. His study reveals that new payday lender outlets are more likely to open in areas that have a larger number of bank branches and a larger population, suggesting that this is a departure from the industry's history and may mark its evolution as it reaches for new markets.

Several large US studies utilize census tract-level data to carry out location analyses of payday lenders, cheque cashers and pawnshops relative to mainstream banks in seven counties across the US and in Washington, DC (Temkin & Sawyer, 2004), in Dallas, Texas (Apgar & Herbert, 2004), and across the entire country (Cover, Fuhrman, & Kleit, 2011; Fellowes & Mabanta, 2008; Prager, 2009). The main finding common to all is fringe banks are disproportionately located in lower-income and minority areas, but often in close proximity to banks.

Although studies in the UK do not address fringe banks per se, they do examine the geographic patterns of bank and building society branches for evidence of dwindling supply in areas with low average income. In tracking reductions to branch stock in the UK from 1989 to 2003, Leyshon, Signoretta, and French (2008) categorized branch closures by type of neighbourhood to find that the highest closure rates occurred in multicultural metropolitan areas that include poor, inner-city areas as compared to suburbs or small towns.

Canadian studies are very few; however, one Winnipeg study found that mainstream bank branches dropped from 20 to five locations in one inner-city neighbourhood during the period 1980 to 2003. At the same time, fringe bank locations escalated from 1 to 18 during the same period (Buckland & Martin, 2005). A second study carried out by Buckland, et al. (2007) involves the mapping of payday lenders currently located in Winnipeg.⁸ While no statistical methods are applied, the maps suggest that the current inventory of payday lenders is concentrated in neighbourhoods with poorer income indicators, lower education levels and higher minority populations.

A single study prepared for the Canadian Bankers Association submission to the Senate Standing Committee on Banking, Trade and Commerce, provides a brief analysis of bank branch and payday lender outlets operating in four Canadian cities: Toronto, Vancouver, Winnipeg and Halifax (Jones, Bermingham, & Erguden, 2005). The researchers draw distance bands of 250, 500, 1,000, 1,500, 2,000 and 3,000 metres around the locations of payday lenders to test the hypothesis that payday lenders have located in areas not served by traditional financial

⁸ The study was carried out for the purpose of the Manitoba Public Utility Board hearings on setting maximum rates for payday lenders, and was intended to explore the relationship between payday lender outlet location and concentrations of vulnerable citizens.

institutions. In each of the four cities studied, more than 50 percent of the payday lenders are found within 250 meters of a bank branch, and more than 90 percent of locations are found within 1,000 meters. The authors argue that the evidence does not support the idea that payday lenders are acting as infill for bank branches.

To date, spatial studies establish what appears to be a location bias on the part of fringe and mainstream banks, and to that extent they support the claim that the supply of traditional banking services is weaker in poor neighbourhoods. Overall, while research into payday lenders and their density in low-income and minority communities is fairly well established in the US, no longitudinal studies that examine the relationship between trends in the industry's location pattern and location of mainstream bank branches have been located. A survey of the relatively few spatial studies of this type in Canada indicates a much more significant gap that this research project aims to address.

2.2 INDUSTRY BACKGROUND

The primary agents considered in the institutional approach to financial exclusion include banks (mainstream and fringe), consumers and the state. For the purpose of this study, structural forces affecting supply of conventional branch-based financial services coupled with growing demand for small loans by cash-strapped consumers help explain the emergence of the payday loan industry in Canada. In addition to exploring how key agents have played a role in the rise of the industry, a review of the literature examines what is known about the structure of the payday

loan sector, the characteristics of its customers and the regulatory environment in which it operates.

2.2.1 Factors Influencing Supply of Payday Loans

i. Historical changes affecting distribution of mainstream bank services, 1980s-2000s

Branch banking in Canada has undergone significant changes during the study period, affecting the types of services offered and where they are distributed, some of which are tied to suburban development and locational shifts in the consumer retail sector more generally. Prior to the 1960s, reliance on public transportation meant shopping and banking destinations were concentrated downtown or along major arterials. Banks at the time were limited to accepting deposits and making commercial loans, and it wasn't until revisions to the Bank Act in 1954 and 1967 that new services such as consumer loans and mortgages could be offered through their branches (Department of Finance, Canada, 2002).

During the post-war era, economic prosperity and increased access to private transportation gradually improved mobility among consumers, prompting development companies to experiment with the concept of planned shopping centers to house a variety of stores in suburban markets (Jones, 2000). As suburban neighbourhoods grew in size and importance, banks and retailers of all types began to relocate their premises to be closer to their customers and to take advantage of more economical retail space, often in newly-built shopping malls along major transportation routes. By the 1980s, the population of people living, working and shopping in the downtown core of major Canadian cities dropped precipitously as investment and interest in the area waned, made worse by the era's economic downturn (Jones, 2000).

a. The 1980s

Despite the recession, the 1980s were a period of significant suburban expansion for the banks. The economic downturn meant funding for expansion was curtailed; consequently, older branches in declining markets were exchanged for new ones in markets offering more growth potential (Schull & Gibson, 1982). Technology had not yet materially changed the way consumers accessed services, so branch closures would have meant that customers would have to travel further to conduct their banking, or perhaps change banks altogether. Residents of the inner city, least likely to own transportation, would have farther to travel to access the full range of deposit, loan and transaction services offered through well-regulated banks and credit unions (Buckland & Martin, 2005). This period of suburban migration of bank branches coincided with the rise of cheque-cashers in inner-city neighbourhoods.

b. The 1990s

During the 1990s, banks continued to establish new branches in growth markets, while continuing to close and consolidate branches in areas of declining population. Although branches remained the distribution points from which the bulk of financial services were sold, they were also responsible for generating most of the costs incurred by the industry. Comparable to trends in the US and UK, economic decisions to close branches meant a general withdrawal of infrastructure more pronounced in, but not limited to, poorer communities (Avery, Bostic, Calem, & Canner, 1997; Leyshon & Pollard, 2000). The historical context for this development

may be found in the impact that the forces of domestic deregulation, disintermediation,⁹ technological advance, and globalization were having on the structure and competitiveness of Canada's banks at the time (Task Force Report on the Future of the Canadian Financial Services Sector, 1998). The pressure to keep pace with larger and better performing international banks culminated in, among other things, a fundamental re-thinking of the role of consumer bankers as retailers, and local branches as retail sales platforms (Lockhart, 2005).

The introduction of automated banking machines, telephone and on-line banking and debit cards was changing how customers accessed routine services, and unproductive floor-space was reconfigured to create more space for selling financial products and services to generate fee income (Leyshon & Pollard, 2000). For the first time, data warehousing was permitting banks to segment and evaluate the profitability of their customer base, and resources were dedicated to retaining and promoting services to customers deemed to be more financially active, based on selected attributes including larger assets and higher net worth (Coltman, 2007; Danna & Gandy, 2002).

Related to this development, the Canadian financial services industry turned its attention away from the provision of small, unsecured, short-term loans in the late 1990s. Fewer local branches and the centralization of loan administration meant high volume, labour intensive loans requiring knowledge of the borrower and surrounding market conditions were costly to originate, administer and service. Instead, banks turned their attention to more economical products requiring less manual intervention such as overdraft protection, personal credit lines and home

⁹ Changes to financial institution legislation in 1987 together with significant revisions to the Bank Act in 1992 allowed banks to operate trust and securities subsidiaries, touching off a flurry of merger activity among banks, trust companies and major brokerage and investment houses (Department of Finance, Canada's Banks, 2002).

equity financing, using conventional underwriting principles based on automated credit scores (Canadian Bankers Association, 2005; Ramsay, 2000). These are financial products that, by their nature, exclude high risk consumers from mainstream credit, and provide easy and convenient access for others. The retreat of mainstream financial institutions from the small, unsecured loan market made way for specialized entrants willing to assume that risk for a premium.

As banks began to trim their branch infrastructure in selected markets, local credit unions generally maintained their networks. In its Submission to the Task Force on the Future of the Canada Financial Services Sector (1997), the Royal Bank refers to the maturity of the financial services industry and the role of technology in creating excess capacity, saying “increasing capacity implies over-banked markets and suggests substantial consolidation will be required” (as cited in Bowles, 2000, p. 20). Credit unions, owned by their members and motivated to obtain the best costs and rates for their membership, were under less pressure to produce higher returns than the banks, which were accountable to their shareholders. Smaller, provincially regulated and more local in scope, credit unions at the industry level were neither organized nor able to take full advantage of the technology and decentralization that was available to the banks at the time (Chan & Mountain, 1986). As a result, lending authority and the ability to make small loans at the local branch level remained relatively unchanged. While this provided some stability for a time, by the late 1990s the cost to update and maintain much needed technology platforms and administrative support was more than many small credit unions could sustain on their own. Uncertainty over their ability to serve their membership and function economically in the future would ultimately lead them to consider the benefits of merging with other credit unions (Cash, 2009). Doing so would allow them to pool resources, streamline operations and attain needed

economies of scale. Indeed, one of the major recommendations of the Task Force on the Future of the Canadian Financial Services Sector was to strengthen the position of credit unions to make them more effective, including the power to become or to form banks.

c. The 2000s

The 2000s can, in some ways, be described as experiencing an acceleration of trends rooted in the prior decade. The forces that initiated a reshaping of the financial services industry in the 1990s are still at work, but with the government taking a more active role in stemming the impact on economically vulnerable communities. Widening access to basic banking services became a policy ambition of the Canadian government in 2001; the product of an extensive public consultation process that resulted in significant legislative reform of the financial services sector. The new policy framework includes measures to promote the efficiency and growth of the sector, foster domestic competition, empower and protect consumers and improve the regulatory environment (Department of Finance, Canada, 2000). A stronger role for credit unions is also contemplated within the policy framework, allowing for the creation of a single national services entity that will help credit unions overcome regional fragmentation and help them to compete better with large institutions.

New legislated consumer provisions in the Bank Act provide for an array of protective measures, ensuring access to basic banking services, the provision of low-cost accounts, publication of annual public accountability statements and notification guidelines for branch

closures.¹⁰ The notice of branch closure regulations requires banks to provide four-months notice of branch closures. In rural areas or low-income, inner-city areas where there is no other financial institution located within a 10-kilometre radius of the closing branch, six-months notice is required. The intention is to ensure that community stakeholders have an opportunity to consult with the bank prior to closure. In addition, publication of the address of deposit-taking institution branches opened and closed over the year, reported by province, are to be included in each institution's annual public accountability statement.

Public concern is also raised at the time about the gradual decline of bank branches in much smaller rural towns and villages in regions across the province and country (Bowles, 2000). According to a study prepared for the CBA submission to the Senate Standing Committee on Banking, Trade and Commerce, Jones, Gomez-Insausti, and Bermingham (2004) attribute changes in the banking system in small Canadian communities with less than 50,000 inhabitants to the economic performance of those areas. But they also point out that the smallest communities, with less than 5,000 residents, tend to have a higher branch density than larger communities, and that only one percent of small communities in Canada are without a branch of a deposit-taking institution.¹¹ Of those eleven communities, the median distance from the nearest serviced community is under fourteen kilometres. Nevertheless, to protect the interests of affected rural communities, the government took the position that the closure of a branch of a

¹⁰ Banks and federally incorporated or registered trust and insurance firms with more than \$1 billion in equity are required to publish information in the form of public accountability statements describing the institution's contributions to the Canadian economy and society. A detailed interpretation of the regulation is found in the amendment to the Bank Act (Communication Canada, 2002, March 21).

¹¹ According to the evidence presented in the study, communities with populations under 5,000 tend to have a density of 5.7 branches per 10,000 inhabitants, whereas larger communities with populations between 20,000 and 50,000 have a density of 2.1 branches per 10,000 inhabitants (Jones et al, 2004, p.2).

deposit-taking institution in a small town, especially in cases where it is the lone bank, would create undue hardship for the residents and the viability of the township. The notice of branch closure regulation in 2001, combined with stated support for a greater role for credit unions, was introduced to allow sufficient time for communities to consider alternative service delivery with the departing institution or to approach other financial service providers.

Meanwhile, changes to consumer finance legislation during the late 1990s in several US states allowed Money Mart — along with other multi-service cheque-cashers — to expand their product offerings to include the more profitable payday loan. The new lead product helped to offset declining revenues associated with the waning cheque-cashing business.¹² The timing of this development corresponds with the sudden appearance and rapid growth of the number of yet to be domestically-regulated payday loan operators and outlets in Canada during the 2000s.

ii. The emergence and growth of the payday loan industry in Canada

The business of providing payday loans is relatively new, beginning in the early 1990s in the US and five to ten years later in Canada as an outgrowth of the cheque-cashing industry, based on the casual but growing demand for small loans between paydays. Payday lenders are sometimes referred to as cheque-cashers. These terms are used interchangeably to describe the majority of vendors that offer both services as lead products and rely on them as a primary source of revenue. However, blurring the distinction between the two can be problematic when seeking to explain the sudden appearance and rapid expansion of the entities in question. It is important to note that the two services are unique, each with their own target market and set of

¹² The importance of diversification in view of the changing nature of the cheque-cashing business is highlighted in parent company Dollar Financial Corp. (2004) filing with the Securities and Exchange Commission (October 12, 2004, p.12).

auxiliary products. Cheque-cashing as well as other transactional services including bill payment, money orders, money transfers and miscellaneous card products are aimed at the “unbanked”: low-income people without active bank accounts or access to basic services such as loans, mortgages, credit cards or savings instruments and who are extremely vulnerable in terms of their exclusion from the financial system. Payday loans, on the other hand, are targeted toward the “under banked”: those people with jobs and bank accounts but who may be vulnerable to unexpected changes in circumstances and who may be using credit to maintain living standards in the face of stagnating incomes.

Indeed, much of the debate surrounding the payday loan industry turns on the nature of the loan itself. To qualify, borrowers are not subjected to a credit check, but must have a bank account and evidence of employment in order to facilitate the transaction. A post-dated cheque or preauthorized payment marked for the following payday is exchanged for the amount of the loan plus fees. Fees for the service typically range in the area of \$17 to \$27 per \$100 borrowed. When annualized, interest rates and other fees charged for borrowing \$280 for ten days, the average cited by the industry (Whitelaw, 2005), can range from 450 to over 600 percent, far exceeding the Criminal Code’s usury threshold of 60 percent per year,¹³ and higher still than conventional forms of short-term credit, such as personal credit lines, overdraft protection service and credit card cash advances, which tend toward a range of 10 to 40 percent per year. Of equal concern are loan limits, usually determined as a percentage of the borrower’s net pay.

¹³ Annual Percentage Rate (APR), is a standard measure of the total cost of credit to a consumer. By converting the cost to an annualized rate, the consumer is able to compare costs among different credit instruments or the same instruments offered by different financial service providers. The calculation incorporates the principal, total fees and duration of the loan. For example, a \$280 payday loan for a 10 day period with total fees of \$50 would be calculated as follows: $APR = (\text{total fees/principal}) \times (365/10) = (50/280) \times (365/10) = 6.52$, or 652 percent.

These vary by lender and can range from 20 to 50 percent of net pay plus all fees, making it difficult for borrowers to repay the debt without again falling short of cash during the following pay period (Stegman & Faris, 2003).

Salary advances, while once widely available from one's employer, are rare today due to outsourcing of payroll processing and direct deposit of proceeds to the recipient's account. Electronic payment and smart-card technology has at the same time gradually rendered paper cheque-cashing services obsolete; therefore, payday loans are well positioned to usurp cheque-cashing as a primary source of revenue for multi-service outlets. The handful of outlets offering payday loans that first appeared in the US in the early 1990s has since grown to 22,000 with an estimated annual loan volume of \$40 billion (Mann & Hawkins, 2007). The market, far from saturated, is expected to see the number of outlets double again over the next ten years. Following a similar pattern, the payday loan industry in Canada has grown from relative obscurity to an estimated 1,400 payday loan outlets across the country, serving more than 2 million Canadians per year with estimates of annual revenues exceeding \$1 billion (Ernst & Young, 2004; Kitching & Starkey, 2006). While the business is small in comparison to other financial service operations, it has roughly the same number of branches as the Royal Bank of Canada, which speaks to its physical presence. Regionally, there are more payday loan outlets per capita in the western provinces than the rest of Canada (Environics Research Group, 2005). This physical network, of course, does not account for the growing number of payday lenders operating over the internet or by telephone, many of which are domiciled in the US.

Sources differ as to the exact size and profitability of the Canadian industry, quoting a wide range of estimates based on varying assumptions (Ernst & Young, 2004; Kitching &

Starky, 2006; Ramsay, 2000; Robinson, 2006). Profit margins, on average, are considered comparable to those earned by others in the financial services industry; but while some outlets struggle to survive, others earn above average returns. Lack of regulation means that information is difficult to extract, and while no single authoritative account exists, the industry is generally regarded as a high, fixed-cost business comprised of payroll expenses for the one or two employees who staff each outlet, and rent and office expenses, plus its share of administrative overhead if the store is part of a larger chain. Typically, payday loan outlets are open seven days a week with extended hours that can range from twelve to twenty-four hours a day. It is a labour-intensive business, and the cost to process a small loan is the same as for a larger sum, regardless of the term to maturity. Operating costs represent the majority of total costs on average, and bad debt expenses associated with loans not repaid within a 90 day period are thought to be in the range of two to three percent of the principal loaned for most payday lenders, plus the lender's cost of funds which are less significant (Robinson, 2006).

Multi-service firms that operate as part of a larger franchise are able to spread their fixed costs over a wider range of services and are much more efficient than small, single-line, independents. Efficient producers are growing by takeover and consolidation. As a result, the industry is highly concentrated, dominated by three major players: Money Mart, Cash Store Financial Services Inc., and Cash Money. The industry leader is Money Mart, a Victoria-based subsidiary of US-based Dollar Financial Group Inc., with an estimated market share of 30 percent by number of stores — over 350 located across Canada — and close to 50 percent by volume of business (Kitching & Starky, 2006). Cash Store Financial Services, Inc., its largest competitor, is an Edmonton-based, publicly traded company that operates 574 stores

concentrated in the west under the Cash Store Financial and Installoan banners. Canadian-owned and operated Cash Money trails with just over 100 outlets, mostly in Ontario. The balance of the industry is comprised of smaller companies with single or multiple store locations scattered mainly throughout Toronto and the Golden Horseshoe area. One notable exception is that of National Cash Advance, marking its arrival in 2008 with seven branches in Manitoba and six in British Columbia, followed by four more in Alberta since that time. National Cash Advance is a subsidiary of Advance America Cash Advance Centers, Inc. According to a statement filed with the US Securities and Exchange Commission (Advance America Cash Advance Centers, 2009), the parent company is the largest provider of payday cash advance services in the US, as measured by the number of outlets.

Until very recently, payday lenders were not known to offer any type of depository services. Cash Store Financial appears to be a rare exception. In the third quarter of 2010, the company entered into an agency agreement with DirectCash Bank (DC), a branchless, federally regulated Schedule 1 bank headquartered in Calgary, Alberta, to offer basic deposit account products to its clientele. In February, 2011, it introduced a premium bank account that permits unlimited free chequing as well as free on-line bill payments. According to the company's 2010 annual report, both are insured by the Canadian Deposit Insurance Corporation (CDIC) and consumer acceptance has been high. The report goes on to say that a long-term business strategy of product development and diversification is designed to help offset the pressure on revenue and profit margins caused by the provincially-regulated rate caps on payday loans (Cash Store Financial Annual Report, 2011,p.7-8).

Curiously, establishments offering payday loans are increasingly found alongside banks and credit unions in suburban neighbourhoods prompting new questions (Jones, et al., 2005). Could it be working middle-class families that are expanding the market for payday loans? Money Mart says it is. In testimony before the Manitoba Public Utility Board, the company confirmed its cheque-cashing business was in decline, and refuted claims that the industry targets unbanked neighbourhoods and vulnerable households saying “this is not the business, and it’s not the future” (Manitoba Public Utilities Board Transcript, Volume IV, 2006, p. 738-745). Contrary to common perception, the company is not seeking to avoid banks; it’s seeking to be near banks in a complementary capacity, and argues the industry has been moving toward a receptive and solidly middle-class target market over the last number of years.

According to an analogy drawn by its spokespeople, Money Mart is to a credit union or bank as 7-Eleven is to Safeway (Manitoba Public Utilities Board Transcript, Volume IV, 2006, p. 708-709). In other words, customers choose willingly and are prepared to pay more for the convenience of its services. Can these assertions be believed? Skeptics argue that such statements are motivated by the industry’s desire to shed an unsavoury image while arguing for less restrictive regulation. But what if what they say is true? In a country that is host to a strong system of national, federally chartered banks and provincially regulated credit unions, the implication is that more and more consumers are turning to a vastly more expensive service to support themselves, their families and their lifestyles.

2.2.2 Factors Influencing Demand for Payday Loans

i. Profile of the payday loan consumer

According to a series of national-level surveys, an estimated seven to eight percent of Canadians admit to ever having used a payday lender, cheque-casher, or any type of fringe bank in general.¹⁴ The question of who uses payday lenders is posed frequently in the literature. However, data on payday loan consumers is limited, and reports vary depending on the sample, the method and the purpose of the research. Buckland et al. (2007) analyze evidence drawn from US and Canadian sources to identify common characteristics that emerge from these studies. The report compares the findings of key studies carried out in the US (Caskey, 2002; Elliehausen, 2006; Elliehausen & Lawrence, 2001; Stegman, 2007; Stegman & Faris, 2003) with three main Canadian sources of national-level data: Environics Research Group (2005), Ipsos-Reid (2005), and Statistics Canada's Income Statistics Division Survey on Financial Security (2005).¹⁵

The analysis of these Canadian and US studies shows that while specific results may differ, there is enough consistency across basic categories to form a general profile of core payday loan clients that includes income level, credit situation, age, family type and ethnicity.

¹⁴ The estimate is based on Buckland et al.'s (2007) summary of results (page 26), "The rate of ever having used cheque-cashers in 1998 was 8 percent (from the Mackay Report, as cited in Lott & Grant, 2002, p.33); in 2001 the rate was 8 percent (Ekos Research Associates, 2001) and in 2005 the rate of ever using a cheque-casher or payday lender service was 7 percent (Ipsos-Reid Corporation, 2005, p.10). In addition, a 2002 national survey found that almost 5 percent—1.4 million Canadians – had used a service from a fringe bank in the last three years (Lott & Grant, 2002)".

¹⁵ The Statistics Canada survey is significant for having asked, for the first time, whether the 5,300 respondents had received a payday loan in the previous three years. Subsequent studies have drawn extensively on this survey (Buckland et al., 2007, Simpson & Buckland, 2009, Pyper, 2007). The Ipsos-Reid study was commissioned by The Financial Consumer Agency of Canada, which surveyed 5,005 Canadian adults aged 18 years and older in five waves between February 1 and March 11, 2005 about their use of payday lenders and cheque-cashers, their access to banks, and their familiarity with FCAC. Finally, the Environics Research Group was commissioned by the Canadian Payday Lenders Association (CPLA) to carry out 2,000 telephone interviews, consisting of a random sample of 1,000 Canadians in the general population and a sample of 1,000 recent borrowers of payday loans selected from a list supplied by CPLA members.

Overall, Buckland, et al. (2007) find that the core group of payday loan clients in both countries is younger, earning lower or more modest incomes and facing more credit constraints than the general population. Ethnicity, while an important determinant in the US, is one that has only recently been explored by one case study in Canada (Bowles, Ajit, Dempsey, & Shaw, 2011). Nevertheless, the authors find that payday loan consumers can be characterized as distinct from the general population in the following ways:

- Consumers of payday loans have lower family incomes than those who do not use payday loan services (non-consumers),
- The general level in which data are available mean it is difficult to comment as to what extent payday loan clients fall below the low-income cut-offs (LICOs)¹⁶,
- Consumers of payday loans are more likely to be fully employed but have lower education levels than non-consumers,
- Consumers of payday loans are younger and more likely to live in larger families with children than non-consumers,
- About one-quarter of payday loan consumers use the service at least once a month and these users tend to have lower family incomes than less frequent payday loan users,

¹⁶ There is not an official poverty measure in Canada. The most commonly cited measure is the Low-Income Cut-off (LICO), calculated annually by Statistics Canada. The calculation uses the Consumer Price Index to measure the average cost of basic needs: food, clothing and shelter by geographic region and compares that figure to corresponding average after-tax earnings. Statistics Canada considers an economic family and persons not in an economic family, to be living in "straitened circumstances" if more than 20 percent of after-tax earnings are spent on basic needs than the corresponding average. For more details, consult the Statistics Canada Census Dictionary (Statistics Canada, 2006a), available at <http://www12statcan.gc.ca/census/2006/ref/dict/fam01>

- Consumers of payday loans cite convenience as an important factor in choosing payday lenders but are also less likely to have other sources of borrowing, such as credit cards or someone to help with financial difficulties, or financial reserves, and
- Probit regression results show lower family income, younger age and lack of a university degree are positively associated with the probability of being a consumer of payday loans even when other characteristics are considered (Buckland et al., 2007, p.36).

ii. Structural forces affecting the demand for payday loans

A recent Statistics Canada report (Pyper, 2007) also draws on the 2005 Survey of Financial Security to conclude young families with \$500 or less in their bank account and experiencing difficulties meeting bill or loan payments were significantly more likely to have used payday loans than other households. Unable to meet routine or unexpected household expenses with their current income, these households turn to payday loans to help stretch their resources. To be sure, financial stress burdens many Canadians despite having a job and a regular paycheque. According to the Environics Research Group (2006) survey, 10 percent of the employed population admits they would experience financial hardship if their paycheque was delayed for just two days. And a national survey of over 2,766 employees conducted by the Canadian Payroll Association (2010) found that 59 percent of workers are living paycheque to paycheque, saying they would suffer financial difficulty if their paycheque was delayed by a week. The number jumps to 65 percent of younger workers aged 18 to 34 years.

In an era of runaway consumer culture, there is much to suggest that consumers themselves are responsible for the economic deterioration of their households by overspending incomes and failing to sock away savings for a rainy day (Anderson & Nevitte, 2006; Watson, 2003). However, structural factors indicate “increased demand for credit is driven in significant part by holes in public and private safety net programs and also by employment and family instability” (Braucher, 2006, p. 329). Other studies demonstrate that increasing inequality of income (Yalnizyan, 2007),¹⁷ together with high debt-to-income ratios (Ramsay, 2000, Sauvé, 2011, Tal, 2009),¹⁸ and a decline in savings and earnings stability combine to make Canadian families vulnerable to adverse shocks such as recession, or unexpected crises that may include job loss, illness, divorce or emergency expenditure (Beach, Finnie, & Gray, 2003; Morissette & Ostrovsky, 2006).

Is the rising debt load indicative of lack of restraint and uncontrolled spending behaviour? It is a question of considerable debate. Sauvé (2011) draws on the Statistics Canada annual Survey of Household Spending to look at spending patterns of middle-class households from 1999 to 2008. The investigation reveals that after adjusting for inflation, all four of the fastest

¹⁷ Data from the Survey of Consumer Finances and Survey of Labour and Income Dynamics is used to compare the distribution of income in Canada during two periods of economic growth: 1976 to 1979, and 2001 to 2004. Income of families with children under the age of 18 years, representing nearly half of the country’s population, is rank-ordered and segmented into deciles. The contention is that the benefits of a strong economy are largely accruing to the affluent at the expense of the majority of Canadian families, who are losing economic ground despite working more weeks and hours in the paid labour force.

¹⁸ These authors warn the financial security of Canadian households is increasingly at risk due to lack of liquidity and mounting debt. The debt-to-income ratio among consumers has risen to record levels of 78 percent in 1992 to over 100 percent in 1998. A declining savings to disposable income ratio has fallen from 15 percent of annual disposable income in the mid 1980s to almost zero by 1998. More than a decade later, the trends show no signs of abating. The debt-to-income ratio is now 150 percent and climbing. Consumer spending continues to outstrip the growth of personal disposable income. At least 40 percent of Canadian households have no financial savings outside of their chequing accounts.

growing major categories of expenditure can be considered as short- or long-term necessities. He notes the most rapid increase in spending over the ten-year period was for items classified as personal care, which increased by more than 125 percent, and public transportation which increased by 58 percent (more than double the rate of increase for private transportation). Out-of-pocket health care expenses jumped by 43 percent over this period after including public and private insurance premiums together with prescription drugs. Education expenses posted an increase of 43 percent, after taking tuition fees, textbooks and supplies into account. The study suggests that for many households, much of the strain on finances is due to the increases in costs of basic necessities, concluding the problem is a case of need, not greed as is often argued.

On balance, the literature shows that families of all types are increasingly subject to the types of economic and social risk usually associated with low-income or lone-parent families. The associated stress of living with temporary or chronic financial uncertainty helps to explain why so many families may fear they are a paycheque away from financial crisis. These deepening trends support the case that the rapidly expanding payday lending industry may indeed be moving up market to capture an increasingly vulnerable, or financially weakened middle-class consumer.

2.2.3 The Regulatory Environment

Regulation and public policy regarding the payday loan industry continues to be a controversial topic, given competing ideologies around the role of the state (Parliament of

Canada, 2007).¹⁹ In Canada, the chief federal legislation governing payday lenders is embedded in section 347 of the Criminal Code (Department of Justice, Revised Statutes of Canada 1985, s.347). This section prohibits loan arrangements at a criminal rate, defined as any interest rate in excess of 60 percent per annum, including all associated charge or fees. Importantly, the statute was originally drafted to assist police authorities with the prosecution of loan sharks in the context of organized crime; it was not intended as consumer protection legislation to regulate the cost of borrowing (Waldron, 2003). Later attempts to amend the status of section 347 federally to make it more applicable to the special case of payday lenders did not succeed. Ultimately, Parliament introduced new federal legislation under Bill C-26 that exempts payday loans below \$1,500 and for less than 62 days from the Criminal Code. Instead, the bill enables the provinces to regulate the industry through consumer protection legislation that establishes a maximum allowable rate of borrowing.

Several provinces have either enacted legislation or are in the process of doing so. Bill C-26 provides some direction as to what components are required under provincial regulation although it allows for a variety of approaches.²⁰ In a law and political economy research paper published by Osgoode Hall Law School at York University, Ben-Ishai (2008) conducted an analysis of current provincial reform efforts, noting the difficulty of formulating a uniform approach when there is limited domestic analysis of the industry and regulatory options. In this

¹⁹ The proceedings of the Standing Senate Committee on Banking Trade and Commerce (Parliament of Canada, March, 2007) reveal the ideological dilemma surrounding the bill. Some argue that it doesn't go far enough to rein in an industry that ought not to exist. Others counter that the industry is legitimate, is meeting the needs of "the little people and people who are willing to pay, and is entitled to reasonable profit" (p. 5). Still others support the industry on the basis that banks should not be forced into losing money by attending to this market.

²⁰ Although the approaches to regulation differ among provinces, most have worked to comply with the following Bill C-26 requirements: interest rate caps, rollover prohibition, cancellation protection, disclosure agreement, posted warnings, licensing requirements, and remedies. For details of these requirements, see Ben-Ishai (2008, p. 12).

case, variation in provincial regulation serves an experimental purpose, helpful in evaluating the effectiveness of different schemes on a previously unregulated industry.²¹

The province of Manitoba, first to attempt a cap on payday loans, conducted an extensive review of the sector over twenty-three days of Public Utility Board Hearings commencing November, 2007.²² Ultimately this process led the Public Utilities Board to place a cap on fees for payday lending at a multi-level rate beginning at 17 percent for the first \$500 loaned, but, because the decision was challenged in the Manitoba Court of Appeal, it was not enacted into law. The appeal has since been withdrawn because of legislative changes that make the Provincial Cabinet, rather than the PUB, responsible for setting the rate.²³ The Province's provisions such as a 17 percent allowable maximum rate on the principal amount of the loan, capped at 30 percent of the borrower's net monthly pay, and additional measures related to licensing fees, business practices and enforcement, are set out in The Consumer Protection Act and the Pay Day Loans Regulation which came into force October 18, 2010.²⁴

Other provinces have adopted different positions, resulting in rate caps ranging from \$21 per \$100 to total prohibition. In August, 2009, Nova Scotia was the first province in Canada to officially regulate the payday loan industry, allowing a maximum rate of borrowing at \$31 per \$100 borrowed. Both British Columbia and Alberta have enacted regulations setting the

²¹ Even in the US, where the growth of the payday loan industry has been the subject of a great deal of regulatory attention and experimentation over the last fifteen years, the existing regulatory framework is deemed inadequate. Mann and Hawkins (2007) provide a comprehensive account of the US business models and regulatory regimes in operation today, offering a menu of options that regulators might choose to implement based on policy objectives. A moderate position is advocated that allows the industry to operate, but under tighter regulation and enforcement.

²² The full transcript of the proceedings can be accessed through: <http://www.pub.gov.mb.ca/misc/trans.html>

²³ In the future, the PUB will continue to conduct public consultations and make recommendations to government respecting maximum rates and other provisions, but in an advisory capacity.

²⁴ A detailed account of these provisions can be accessed on the Manitoba Family Services and Consumer Affairs, now Manitoba Healthy Living, Seniors & Consumer Affairs, (n.d.). website.

maximum rate at \$23 per \$100. In contrast, Ontario regulation has capped the rate at \$21 per \$100. In Quebec, the Office de la Protection du Consommateur has long refused to issue permits under the Consumer Protection Act to businesses that charge interest rates in excess of 35 percent per annum, effectively prohibiting the payday lending industry from operating in that province.

Most provisions noted here have the qualified support of the Canadian Payday Loan Association (CPLA), including the use of fee caps between \$20-23 per \$100 loan. Formed in 2004 as a self-regulatory organization for voluntary members, the CPLA obliges its eighteen members to abide by a set of standards and guidelines called the Code of Best Business Practices.²⁵ The association, whose membership includes US-based Money Mart and National Cash Advance but, interestingly, neither Canadian-based Cash Store Financial Services Inc., nor Cash Money, is on record as supporting increased government regulation to protect payday loan customers and the reputation of its membership (Canadian Payday Loan Association, 2005). The Canadian Payday Loan Association carries no jurisdiction over the more than half the industry not represented by the association.

²⁵ The Code of Best Business Practices is available on the CPLA website: <http://www.cpla-acps.ca>

2.3 CONCLUSION

Institutional analysis in the context of financial exclusion theory emphasizes the role of banks, bank consumers and the state in explaining the rapid expansion of the payday loan industry; an outcome viewed as problematic for its patrons, who are generally lower-income or credit-impaired with little to no accumulated savings. Payday lenders are non-depository institutions and fall outside of the federal and provincial regulatory framework covering the activities of Canada's banks and credit unions. In response to public concerns regarding consumer protection, payday lenders have only recently been the subject of specific provincial regulation.

Building on the growing literature on the rise of the payday loan industry in the US, this research aims at using the findings to explore the growth of the industry in Canada. The empirical study that follows will examine the changes in the physical distribution of bank and credit union branches and payday loan outlets in the province of Manitoba over the last three decades.

CHAPTER 3: RESEARCH DESIGN AND METHODOLOGY

In this chapter, research methodology is described and hypotheses are developed regarding the spatial relationships of payday lenders, banks and credit unions relative to each other and to demographic and socioeconomic factors associated with location. Analysis methods and hypothesis testing are outlined for each phase of the study, including site selection, data sources and collection procedures.²⁶

3.1 RESEARCH DESIGN

The purpose of this study is to trace the emergence and expansion of payday lending outlets in Manitoba during the period 1980-2009, and to explore whether there has been a shift over time in the site location strategies of payday lenders relative to mainstream banks throughout urban and rural communities in the Manitoba market. Early research studies that sought to understand the influence of socioeconomic variables and bank branch proximity on the location decisions of payday lenders generally conclude that they serve lower-income communities neglected by mainstream banks. Nevertheless, a review of more recent literature reveals that payday lenders are now often found locating near traditional banks, which suggests they are expanding their network beyond poor, mainly unbanked neighbourhoods.

²⁶ Portions of this study have been reported previously (Brennan, McGregor, & Buckland, 2011). Copyright 2011 by the Institute of Urban Studies. Adapted with permission.

The study begins with the mapping of locations of banks, credit unions and payday lenders using a Geographic Information System (GIS) for the selected sites.²⁷ Mapping the spatial distribution of financial institutions has been used in previous studies that showed banks gradually withdrawing from poor and minority neighbourhoods (Buckland et al., 2003; Leyshon, Signoretta, & French, 2008). The method has also been employed to map the spatial distribution of payday lenders in selected counties of the United States to show the extent to which poor and minority neighbourhoods are simultaneously targeted by payday lenders and neglected by traditional banks (Cover, et al., 2011; Graves, 2003).

The analysis method used in the study relies on both inductive and deductive approaches. An inductive approach is used to examine the results for evidence of payday lender spatial patterns over the study period, including banks and credit union proximity. It is designed with the expectation that exploration of population data for an entire city or province over time will capture location patterns that may be part of larger trends occurring in the industry and market. Changes in the mix and stock of payday lender outlets and mainstream bank branches are directly observable and sequential patterns provide insight not otherwise afforded by point-in-time snapshots of physical location. Accordingly, a decade-by-decade discussion of general distribution trends of payday lenders and mainstream banks during the study period will offer added context for the mapped observations.

The deductive approach will employ descriptive and statistical methods to test hypotheses. Testing will proceed in three stages. The first stage involves a Pearson's chi-square goodness-of-

²⁷ A Geographic Information System (GIS) is an integrated set of computer software tools that can be used to capture, store, retrieve, analyse and display mapped data (Fotheringham, Brunson, & Charlton, 2000).

fit statistical procedure to test the hypothesis (H1) that payday lenders are disproportionately located in lower-income neighbourhoods versus above average-income neighbourhoods. The chi-square test was selected on the basis that it is a practical test for examining patterns in discrete or categorical variables by checking the agreement between the results observed in practice and the results expected according to null and alternative hypotheses. Goodness-of-fit tests are frequently applied in spatial studies where such comparisons are sought to analyze location patterns. One of the limitations of these tests is that they are subject to the boundaries chosen.

In the second stage, location analysis using distance bands is used to evaluate the spatial void hypothesis (H2) that payday lenders are solely located in areas where there is an absence or reduced presence of mainstream bank and credit union branches. The term distance band refers to the area contained within a specified distance from an object and is a tool commonly used in spatial studies. Here it will be used to measure the distance between payday lenders, banks and credit unions to determine the proportion of payday lenders found in geographic isolation of mainstream banks.

The third and final stage uses descriptive measures along with OLS multiple regression analysis to test whether factors of demand commonly linked to the industry attract payday lenders to lower-income, ethnic minority areas whose residents are younger, less educated and with few options in terms of convenient access to mainstream bank services (H3). The analysis will focus on census years 2001 and 2006, representing a period of rapid payday loan industry growth and geographic expansion in Canada. Descriptive measures are employed to highlight

characteristics of census tracts where various types and combinations of financial service providers are located. Next, the number of payday lender outlets per 100 capita in each neighbourhood is modeled as a function of mainstream bank presence, income level, poverty status, population density, age, education, family type and ethnicity. Results from the analysis of payday lenders are compared to that of mainstream banks to explore the nature and extent of any differences in apparent site location strategy.

A key challenge for location studies is the potential for interdependency among test variables. Classic regression models, for example, assume independence among observations. However, spatial dependencies in georeferenced data involving geographic location information introduce a problem in statistics known as spatial autocorrelation (Fotheringham, Brunsdon, & Charlton, 2000). Spatial data tend to be positively autocorrelated in the sense that similar values cluster together on a map. For instance, types of firms or retailers may be clustered together in a particular geographic area to reach a defined target market, but physical location is also based on factors that include commercial zoning, transportation routes, land rents, favourable lease terms, parking availability and neighbouring tenants. Commercially-zoned areas often include office buildings, industrial property, apartment blocks and a mix of residential neighbourhoods that may or may not accurately represent a particular retailer's target market. As a result, statistical tests that find similarities or differences in geographic distribution of commercial retailers can be over-stated and must be interpreted with caution (Fellowes & Mabanta, 2008). To overcome this challenge, the longitudinal design of the study incorporates a variety of methods to cross-examine results, supported by a historical account of trends within the industry shown to influence location patterns.

3.2 DATA COLLECTION

i. Site selection

The study focuses on five market areas within a single province. The province of Manitoba is an appropriate study site given the relative stability of its economy and population, as well as a statistically viable number of branch locations for the period under review. Currently, there are approximately 302 bank branches, 205 credit unions and caisses populaires, and 80 payday lender outlets located throughout the province of Manitoba. Of these, about 119 bank branches, 68 credit unions and 62 payday lender outlets are concentrated in the province's capital city, Winnipeg (Brennan, et al., 2011). Winnipeg is also shown to rank third among the top three cities in Canada in terms of number of payday lender outlets per capita, behind Edmonton and Saskatoon (Buckland & Dong, 2008). The city currently has a population of just over 700,000 people. It is located in the longitudinal centre of the country, on the eastern edge of the Canadian Prairies. Its economy is focused on agriculture, agro-processing, transportation, and light manufacturing (Manitoba Bureau of Statistics, 2011).²⁸

Brandon, the second largest city in Manitoba, has the next largest concentration of financial service institutions of all types, followed by the rural centres of Portage la Prairie, Dauphin and Thompson (City of Brandon, 2010).²⁹ Other rural towns and villages in Manitoba have a much smaller population base, often less than 1,500 residents, with fewer mainstream

²⁸ Manitoba's population is slow growing but steady at just over 1.2 million. The city of Winnipeg contains 55 percent of the province's population, at 712,000. The province has a diversified economy, with a large and stable service sector and broad export market, which protects it from boom-or bust cycles. The result is a stable, albeit slow-growing economy relative to provinces such as British Columbia, Alberta or Ontario.

²⁹ Brandon has a population of 43,000 and is located 197 kilometers west of Winnipeg. Thompson and Portage la Prairie both have populations in the range of 13,000 and Dauphin is slightly smaller, with a population of 8,000.

bank branches by comparison. The larger of these towns may contain a payday loan outlet, but most do not.

An important consideration in selecting Winnipeg as the study site is the clear demarcation of its inner-city and suburban neighbourhoods. Spatial inequality is reflected in a number of indicators including average income level, unemployment rate, and percentage of households falling below the Low-Income Cut-off. Moreover, some poor neighbourhoods have much higher proportions of Aboriginal and newcomer residents.³⁰ For instance, in Point Douglas, a neighbourhood in Winnipeg's inner-city, over one-half of economic families are defined as low income compared with four percent and six percent in the suburban neighbourhoods of Seine River and Fort Whyte. The unemployment rate in Point Douglas is nearly triple that observed in the suburbs, and there is a stark difference between the relative proportions of Aboriginal populations and households headed by lone parents in these neighbourhoods (MacKinnon, 2009).

The core neighbourhood boundary between Winnipeg's inner-city and suburban neighbourhoods was established by a process of public participation and statistical analysis during the late 1970s, known as the Core Area Initiative (Buckland, et al., 2007). The designated boundary allows for the focused delivery of programs designed to address the urban decline in

³⁰ Poverty is geographically concentrated in the inner city of Winnipeg and it is racialized; that is to say, there is a very high proportion of Aboriginal people and visible minorities located in inner-city neighbourhoods. According to Statistics Canada (2001), Winnipeg's inner city contains approximately 120,000 residents, or about 19 percent of the City's population. Nearly half of the 52,410 Aboriginal people residing in Winnipeg live in the inner city, constituting 20 percent of the inner city population compared to just six percent of the suburban population. Immigrants and visible minorities together account for a further 44 percent of the inner city population, compared to 30 percent of the suburban population (Carter, 2009).

the ring that runs around the downtown, including the acutely impoverished North End which has a falling population and pronounced private sector disinvestment.

The demarcation between Winnipeg's inner-city and suburban neighbourhoods is useful for the purpose of this study, but that is not to say that all suburban neighbourhoods in the city and province are uniformly privileged in terms of level of affluence and education, or that they are less diverse. Indeed, this study does not rely entirely on the inner-city-suburb dichotomy. Still, it is fair to assess a number of neighbourhoods as being more likely to attract middle and upper income households in greater proportions, an important factor in selecting the study site.

ii. Data collection procedures

There are three types of data necessary to conduct the geographic analysis and statistical tests that are part of this study: (i) geographic location data of mainstream bank branches and payday lender outlets, (ii) neighbourhood boundary files for mapping purposes, and (iii) data on neighbourhood demographic and socioeconomic characteristics.

a. Compiling geographic location data

As a first step, to better understand the location patterns of payday lenders relative to mainstream banks within the selected study sites, longitudinal data were used to measure changes in mix occurring over the period 1980-2009. The duration allowed for observation of the landscape prior to the emergence of the payday lending industry, its eventual arrival and its subsequent expansion. To that end, data collection required a record of branch openings, mergers and closures to create the time series and provide a historical perspective.

In terms of mainstream banks, the process of obtaining past and present street addresses for banks,³¹ credit unions, trust and mortgage companies in Winnipeg, Brandon, Dauphin, Portage la Prairie and Thompson was straightforward. A key source of current information is a publicly available, on-line database maintained by the Canadian Payments Association (CPA).³² It is an official record of branch street addresses and transit numbers by geographic region, alphabetized by city and town, and used internally by the industry to facilitate payments between institutions and branches. Hard copies of the CPA directories are published by year, dating back to 1983. Prior to 1983, the Canadian Bankers Association (CBA) maintained the directories in two separate publications: the *Bank Directory of Canada* (BDC) for bank branch information and *Routing Numbers of Deposit-taking Institutions in Canada Other than Chartered Banks* that included credit unions, trust and mortgage companies (Canadian Bankers association, 1978-1982). After 1983, these publications were merged and are now maintained by the CPA (Canadian Payments Association, 1983-2008).

As it stands, there is no official record of payday loan companies operating within Canada or the Province of Manitoba. The data collection process is arduous and is cited in one study as a reason why location studies draw their samples from a single point in time, usually one year, rather than over a period of years, or in a single geographic area (Apgar & Herbert, 2004). A variety of sources were consulted to secure as comprehensive a record as possible. A fairly current Manitoba listing complete with street addresses is contained in the report prepared for the

³¹ Only banks that provide personal banking services were included. Commercial banks, investment brokerages, student loan offices, private banking centres, and representative offices for foreign banks have been omitted. Trust companies vary in terms of whether they are federally or provincially regulated, and differ in terms of the scope of services they provide. Given their relatively small numbers, they have been omitted for the purpose of this analysis.

³²See Canadian Payments Association, Financial Institutions Branch Directory(n.d.) website.

recent PUB hearings to cap payday loan fees (Buckland, et al., 2007). Also, a preliminary historical database of Winnipeg fringe banks, including payday loan companies, that contains street address and open and close dates for the period 1981 to 2008 was offered for this study.³³ Both lists were compiled using telephone directories. The former relied primarily on the Yellow Pages, both online and book versions. The Loans section was searched and businesses known to offer payday loans, or that appeared to offer them by direct reference in accompanying advertisements were included.³⁴ Follow-up phone calls to each company confirmed their status. Websites of major firms with multiple Winnipeg outlets, as well as the CPLA member association website were consulted to ensure that new outlets not yet listed in the Yellow Pages were captured.

The historical list, on the other hand, relied primarily on the Henderson Directory to capture data from 1981 to 2000. The Henderson Directory is a book of data that lists the names, addresses and phone numbers of all businesses located in Winnipeg for any given year. After 2000, the Henderson Directory ceased to be published and the Yellow Pages were used to complete the list. Open and close dates were determined by recording new businesses and locations on to the record the year they first appeared, and presumed closed sometime in the previous year when they did not reappear in the directory. Both the current and historical lists were used in this study as a base reference to be verified, modified or updated as necessary. The data were verified using both White and Yellow Pages and company websites. The data for

³³ Courtesy of Jerry Buckland, International Development Studies, Menno Simons College.

³⁴ Until 2005, no Payday Loans category existed in the Yellow Pages. Payday lenders advertised in the Loans, Cheque Cashing and Pawnbrokers sections. Only businesses that explicitly advertised that they offered payday loans by business name or through paid advertising were included, therefore small, independent businesses may be undercounted during this period.

Brandon, Dauphin, Portage la Prairie and Thompson were collected from rural Manitoba telephone directories obtained from Manitoba Archives, and checked against company websites.

All location data were entered into Excel spreadsheet files that recorded the name of the financial institution, street address, type (payday lender, bank, credit union, or trust company), the opening or first year the entity appeared in the records and the closure or last year the entity appeared in the records.

Error checking and correction

The opening dates and the closing dates were checked for any errors or inconsistencies that might have occurred during manual entry and were corrected using a variety of strategies. These included re-checking the original data source, verifying information through a phone call to the branch or head office of the institution in question, checking internet sources as well as some limited ground-truthing, which involved visits to the physical location to validate addresses.

Geocoding and creating points in ArcGIS

The bank and payday lender addresses within the database were translated into latitude and longitude coordinates through a process known as geocoding.³⁵ First, the contents of each Excel

³⁵ The geocoding automated process that converts addresses into latitude and longitude coordinates confirmed a high degree of accuracy in terms of the quality of the matches. Ninety-nine percent of banking addresses were range interpolated or better (most accurate), 96 percent of credit union addresses were range interpolated or better, and 97.8 percent of payday lender outlet addresses were range interpolated or better. The formatting and completeness of the recorded addresses allows for a returned result that is viewed as a reliable match.

file were copied into the input area of a reliable geocoding program website.³⁶ The site uses address matching to determine mapping coordinates. The information from the output area of the geocoding website, now containing the geographical coordinates (decimal degrees of latitude and longitude, WGS84 datum)³⁷ was copied back into Excel and then imported to an ArcGIS map file. Here, the latitude and longitude coordinates of every known mainstream bank branch and payday lender outlet during the study period were plotted as points on a map and labelled through an automated process that joins the databases. These linkages allow map and attribute data to be manipulated for the purpose of analysis. Layers were also established by industry type to allow for comparative analysis between one type of mainstream bank, such as credit unions, and payday lenders. This process was repeated for every year and every pair of types. Similarly, files containing socioeconomic data describing mapped neighbourhoods were created and linked with other data layers for subsequent analysis.

b. Obtaining neighbourhood boundary files

All maps were created using ESRI's ArcGIS version 9.3. Base map data for the city of Winnipeg was supplied by Atlis Geomatics. Several mapping tools in ESRI's ArcGIS 9.3 were used in combination with Microsoft Office Excel 2003 and SPSS 12.0 to capture, store and analyse data and to present the results of that analysis in map or tabular form. Boundary files based on City of Winnipeg dissemination area levels and census tracts used during testing procedures were sourced from Statistics Canada and the City of Winnipeg.

³⁶ Batchgeocode.com. is a geocoding tool website that utilizes Yahoo! Geocoding API, (application program interface) which is a commercial street map database.

³⁷ Department of Defense World Geodetic System of 1984 (WGS84) represents the standard and most up-to-date reference system for the purposes of mapping, charting, geopositioning and navigation. Coordinates have been determined to be accurate within +/- 1metre. See NIMA Technical Report TR8350.

c. Collecting neighbourhood census data

Finally, census data was used to examine how location patterns of mainstream banks and payday lenders relate to demographic and socioeconomic characteristics. To carry out the regression analysis, maps were updated to reflect the boundary files based on census tracts, rather than dissemination areas used in prior components of the study. Dissemination areas are much smaller geographic units than census tracts, made up of one or more city blocks. Census data at the level sought for the regression analysis is not available for populations under 100, therefore census tracts, which contain on average 2,500 to 8,000 residents, were more reliable as the unit of analysis for the purpose of this portion of the study

Census tracts are also more likely to reflect a lender's market area since they are bordered by major transportation routes, facilitating access to a broader base of consumers. Furthermore, the decision to use census tracts as the unit of analysis over the much smaller dissemination areas is a bid to reduce the potential of associating location with the immediate surroundings of the building and its nearest neighbours along a commercial strip.³⁸ The option of using neighbourhood clusters, which are much larger agglomerations than census tracts, was also briefly considered but discarded given too few observations and less variation for the purpose of testing.³⁹ Because the city of Winnipeg has a smaller population, the range of options may be limited relative to larger cities like Toronto or Vancouver.

³⁸ For a detailed discussion of the merits and potential shortfalls of using different levels of geographic aggregation (i.e., census tract, Zip Code tabulation Area, and county levels) in spatial studies, see Wheatley (2010).

³⁹ There are 23 neighbourhood clusters in the City of Winnipeg, each with an estimated population of 27,000 residents. See City of Winnipeg (n.d.) neighborhood profile website: <http://www.winnipeg.ca/census/2006>

Winnipeg census tracts, also referred to as neighbourhoods, were defined for planning purposes during the early 1970s following the city's amalgamation. Neighbourhoods are defined based on their characteristic features and natural boundaries, such as major transportation routes, rivers, parks and railways, and are classified as residential, industrial or rural. As a result, borders have remained unchanged but for a few neighbourhood areas that were added or altered in response to new land use developments in areas of the city.

Data on the demographic and socio-economic makeup of Winnipeg census tracts were sourced from Statistics Canada Census (2006, 2001). Currently, there are 236 neighbourhoods in the city of Winnipeg, 186 of which have census statistics linked to them. The remaining neighbourhoods are classified as industrial or undeveloped neighbourhoods with populations less than 100; therefore information is not reported by Statistics Canada.⁴⁰ However, in 2001 and 2006, census tracts with reported statistics numbered 163 and 166 respectively.⁴¹ Following extraction of these data, and because there were three census tracts with statistics reported in 2006 that were not present in 2001 (CT 560.06, 560.7, 700.00) and vice versa (520.01, 520.04, 520.05), the total census tract number was increased to 169 in each of the two years. In these six instances, dummy variables were created and coded with zero values in order to prepare the data set in Stata 10.0 compatible format for the pooled regression, which requires the unit ID to be similar over time. Specific variables used in the analysis are detailed in the methods section.

⁴⁰ See City of Winnipeg neighborhood profile (n.d.) website: <http://www.winnipeg.ca/census/2006>

⁴¹ Source: CHASS Canadian Census Analyser website: <http://dc1.chass.utoronto.ca/census/index.html>

3.3 METHODS

3.3.1 General Distribution Trends of Payday Lenders and Mainstream Banks, 1980 – 2009

What are the geographic location patterns of the payday lending sector and the network of mainstream bank branches in the province of Manitoba, and how have they varied over time? The largest payday lender in Canada is on record as stating its intention to locate future outlets closer to banks and toward a more solidly middle-class target market (Manitoba Public Utilities Board, n.d., pp. 738-745). If so, this should show an eventual convergence of both types of financial service providers in areas of the province meeting these conditions. Because a longitudinal study is more apt to pick up the subtleties of payday lender location patterns over time, this factor and other considerations are made more visible in the description of the physical network as it evolves. Selected tables that depict the number of payday lenders, banks and credit unions in selected years are used to illustrate historical trends. Maps are used to provide a visual representation of these data. The urban map divides Winnipeg into suburb and inner-city, with an inset of the inner-city region shown at a larger scale. The rural map locates the selected study sites within the province and provides an inset of each community.

3.3.2 Hypotheses Tests

Is there empirical support for the claim that payday lenders concentrate in poorer neighborhoods in the absence of mainstream bank branches as compared to well-banked, above average-income neighborhoods? Pearson's chi-square goodness-of-fit test was used to test the hypothesis that payday lenders are disproportionately located in lower-income neighbourhoods versus above average-income neighbourhoods (H1). Location analysis using distance bands was

used to evaluate a second hypothesis that payday lenders are solely located in areas where there is an absence or reduced presence of bank and credit union branches (H2).

To what extent do neighborhood demographic and socioeconomic characteristics explain the distribution of payday lender outlets and mainstream bank branches? The third stage of the study involves both descriptive and OLS multiple regression analyses to model the number of payday lender outlets per capita in each neighbourhood as a function of socioeconomic and demographic characteristics hypothesized to determine location (H3). These factors include mainstream bank presence, population density, age, ethnicity, education, employment, family type income level and poverty status..

These tests were performed either for a single year, or for selected years after 2000. Prior to 2000, the payday lender population in Winnipeg was too small to provide statistically valid results. Although results restricted to a single point in time or over two or three years are informative, they are not sufficient for the purpose of this study and are therefore supplemental to the mapping exercise and other non-statistical components of this research.

i. Pearson's chi-square goodness-of-fit test

Hypothesis 1: Payday lenders are disproportionately located in lower-income neighbourhoods versus above average-income neighbourhoods.

Before proceeding with the hypothesis test, a boundary file for City of Winnipeg dissemination areas was obtained together with average 2005 household income from the 2006 Census. The average household income for Winnipeg (census division 11) was \$63,123. The

number of payday lenders, banks and credit unions that existed in 2005 was determined for the following categories:

1. Located in a non-residential/no data dissemination area or area without household Incomes.
2. Located in a dissemination area that had a below average household income (<\$63,123).
3. Located in a dissemination area that had above average household income (>\$63,123).

The city was divided into the three classes for the corresponding chi-square test. If there is no relationship between household income and location of the three types of institutions, then payday lender, bank and credit union locations should appear in equal proportions within the designated income classes. That is, 14.7 percent non-residential, 64.9 percent below average household income and 20.3 percent above average household income.

The chi-square formula used on these data is:

$$X^2 = \sum_{i=1}^n \frac{(O_i - E_i)^2}{E_i}$$

where X^2 is Chi Square:

O_i is the Observed Frequency,

E_i is the Expected Frequency according to the null hypothesis, and

n is the number of categories in the table.

The degrees of freedom are calculated as follows:

$$df = (3 \text{ rows} - 1) (3 \text{ columns} - 1)$$

$$df = (2) (2)$$

$$df = 4$$

Hypotheses to be tested:

H1o: There is no statistically significant difference in the proportion of each of the three selected financial institution types in non-residential, below average household income and above average household income Winnipeg dissemination areas.

H1a: There is a statistically significant difference in the proportion of each of the three selected financial institution types in non-residential, below average household income and above average household income Winnipeg dissemination areas.

ii. Distance band analysis

Hypothesis 2: Payday lenders are solely located in areas where there is an absence or reduced presence of banks and credit union branches.

The following procedure was used to evaluate the hypothesis. First, city maps were produced containing (1) payday lender site locations and bank branch locations, and (2) payday lender site locations and credit union branch locations. The maps were produced for the years 2000, 2005 and 2009. These years were selected to represent the years of greatest growth of the payday loan industry in Winnipeg. Once the map series was completed, distance bands were drawn around each bank and credit union. The distances specified were 250 metres and one

kilometre in keeping with the parameters used in an earlier Canadian study (Jones, et al., 2005), which found more than 50 percent of payday lenders sampled across four cities were located within 250 metres of a bank branch, and more than 90 percent were within 1,000 metres. The databases were linked through a spatial join procedure in GIS to associate the payday lenders, banks and credit unions with band distances, and then imported into Excel to calculate the results. The number and percentage of payday lenders in Winnipeg were identified and categorized according to distances (1) within one kilometre (and, therefore, also within 250 metres), (2) within 250 metres, and (3) farther than one kilometre from a bank branch or credit union.

iii. Descriptive analysis

Census tract characteristics where payday lenders, banks and credit unions are located during census years 2001 and 2006 were compared in this analysis. Socioeconomic and demographic characteristics frequently associated with the demand for payday loans were used to select 2001 and 2006 census data for each tract and include: (i) population density, (ii) percentage of population between 15 to 39 years, (iii) percentage of population with Aboriginal identity, (iv) percentage of population with visible minority status, (v) percentage of population 15 years and over with no certificate, degree or diploma, (vi) unemployment rate (15 years and over), (vii) prevalence of low-income economic families after tax, (viii) average number of persons per census family, (ix) average household income, (x) median household income, and

(xi) percentage of lone parent (male and female) families.⁴² Census tracts were then categorized by whether payday lenders, banks, credit unions, some combination or neither are present.⁴³ The number and share of tracts were identified as falling into eight categories: (i) no payday lenders, banks or credit union present, (ii) all three types of institutions present, (iii) payday lenders only present, (iv) banks only present, (v) credit unions only present, (vi) payday lenders and banks present, (vii) payday lenders and credit unions present, and (viii) banks and credit unions present. This analysis formed the basis for the multiple regression exercise that followed.

iv. OLS multiple regression analysis: The model, hypotheses and assumptions

The purpose of this component of the study is to evaluate the relationship between mainstream bank presence and market characteristics on payday lenders' location strategies in Winnipeg over the study period: census years 2001 and 2006. The approach is to establish the degree to which socioeconomic and demographic variables are associated with the number of outlets in each of the census tracts in Winnipeg. Multiple regression analysis (OLS) is carried out using the Winnipeg bank location and census data on 169 neighbourhoods at the census tract level.

To carry out the procedure, the number of payday loan outlets per capita per 100 population in each neighbourhood census tract was modeled as a function of selected of

⁴² The total population of persons in private households is comprised of two groups: persons in economic families and persons not in economic families. Economic families live together under the same roof. They are blood relatives, or spouses, common-law partners and include foster children. By contrast, persons not in economic families live alone, or with those unrelated to them. For detailed definitions of couple families and lone-parent families, see Economic Family Structure (Statistics Canada, 2006).

⁴³ The approach to this analysis is drawn from Apgar and Herbert (2004), p. 11-32.

independent variables, including mainstream bank presence, population density, age, ethnicity, education, unemployment rate, poverty status, income level and family type. Because these variables are frequently hypothesized to attract payday lenders but repel mainstream banks, the dependent variable was alternated between payday lender outlet density, bank branch density and credit union branch density to examine any such effects.

There are a number of expectations for the set of variables that were modeled. Each variable and its expected relationship with the density of payday lender outlets will be described in turn.

a. Dependent variable

The main dependent variable used in the model analyzing the factors associated with location is the number of payday loan outlets per capita per 100 population in each neighbourhood census tract. Hypothetically, the number of payday lender outlets in an area is expected to vary with mainstream bank presence and neighbourhood socioeconomic conditions. Two additional versions of the model were estimated to examine whether the factors associated with location of payday lender outlets have a different association with mainstream bank location.

b. Independent variables

Mainstream bank branch categories

Theoretically, mainstream bank presence is thought to have an important effect on payday lender location. In keeping with the spatial void hypothesis, a negative correlation is predicted

between payday loan outlet density and the density of bank and credit union branches. The strength of the correlation will diminish over time and in certain neighbourhoods if payday loan companies have expanded their presence to suburban neighbourhoods in proximity to banks and credit unions.

Population density

Population density conveys important information in terms of critical mass of potential customers, nature and cost of housing, existence of multi-family dwellings or apartment blocks, likelihood of mixed zoning for residential and commercial purposes, major thoroughfares, and etcetera. A positive correlation between payday loan outlet density and population density is predicted given the economics of locating more outlets in areas most likely to generate higher levels of customer traffic. Consumers of payday loans cite convenience as an important factor in choosing payday lenders (Buckland, et. al., 2007). It follows that payday lenders will choose to locate in retail clusters along major thoroughfares that are easily reached by private and public transportation, or by foot. At the same time, population density tends to drop off with distance from the city centre based on the type and nature of the housing stock.⁴⁴ Therefore, it is anticipated that the strength of any such relationship may weaken as more payday lenders expand to the suburbs.

⁴⁴ In low-density neighborhoods, over two-thirds of the housing stock is comprised of single or semi-detached dwellings. In high-density neighborhoods, this type of housing accounts for just a third of the stock with the balance composed of apartment buildings and condominiums (Statistics Canada, 2008).

Age

The variable measuring percentage of population between 15 to 39 years is used in the model to consider whether the proportion of youth or young families residing in a neighbourhood is associated with payday lender location. A positive correlation is expected between payday loan outlet density and a larger proportion of young people in the population. Research studies based on survey data (Buckland, et al., 2007; Pyper, 2007) show that payday loan consumers tend to be younger, based on life stage and the need to finance expenditure versus asset accumulation as well as inexperience, lack of credit history and lower financial literacy.

Neighbourhood Aboriginal identity and ethnic-minority categories

The variables capturing percentage of people with Aboriginal identity and the percentage of visible minorities in the neighbourhood are included to explore the extent to which payday lender location is associated with racial or ethnic composition of the area. A positive correlation is anticipated between payday loan outlet density and these two independent variables. US location studies find that payday lenders tend to be concentrated in minority neighbourhoods (Apgar & Herbert, 2004; Burkey & Simkins, 2004; Fellowes & Mabanta, 2008; Prager, 2009; Temkin & Sawyer, 2004). One Canadian study carried out by Buckland and colleagues (2007) involves the mapping of payday lenders currently located in Winnipeg. While no statistical methods are applied, the maps suggest the current inventory of payday lenders is concentrated in neighbourhoods with higher Aboriginal populations. This finding is expected to hold but show some variability over the study period in accordance with the observed shift in location strategy. As such, the strength of the effect may have more to do with economic variables associated with

racialized poverty in pockets of the city (MacKinnon, 2009) than exploitation of Aboriginal or visible minority groups per se.

Education

The percentage of the population 15 years and older without a certificate, diploma or degree variable is included as an indication of the level of education attained. Payday loan consumers are characterized as having fewer years of formal education, suggesting that less educated people are more inclined to use alternate financial service providers whereas more educated people are more likely to use banks. Therefore, at the neighbourhood level, the more educated the neighbourhood, the lower the demand for payday lenders. A positive correlation between payday loan outlet density and the neighbourhood percentage of residents without a high school diploma is anticipated, although the relationship may flag slightly over time as payday lender outlets shift to suburban markets.

Unemployment Rate

A negative correlation is anticipated between payday loan outlet density and neighbourhood unemployment rates. Payday loan consumers are more likely to be employed than unemployed given the nature of the product, which requires the borrower to have a job and a bank account. However, the relationship may be weaker in the inner city where multi-service outlets may be servicing cheque cashing or other transaction needs of the unemployed or the unbanked to a greater degree than in other Winnipeg neighbourhoods. Again, the passage of time and change in location patterns may also have a moderating effect on these variables.

Prevalence of low-income families

A positive correlation is expected between payday loan outlet density and neighbourhood incidence of low-income after-tax economic families. Over time, the strength of the correlation may lessen as branches of companies that started out as cheque-cashers to people without a relationship with a bank begin to locate beyond the inner city to broaden their base and to promote a product aimed at salaried borrowers with bank accounts.

Neighbourhood average and median household income categories

A negative correlation between payday loan outlet density and average and median household income is predicted given that payday lender outlets are thought to be more prevalent in low-income neighbourhoods, while mainstream banks are more prevalent in moderate-to-high income neighbourhoods. The strength of this relationship is expected to weaken somewhat as new payday loan outlets are added to the market in more economically diverse neighbourhoods over the study period.

Family type categories

Finally, a positive correlation, however indirect, is expected between payday loan outlet density and neighbourhood incidence of lone-parent families, as well as average family size. According to one local study (MacKinnon, 2009), lone-parent families and larger families are more prevalent in lower-income Winnipeg neighbourhoods. If payday lender outlets are indeed more densely located in lower-income neighbourhoods, then the relationship between these variables may be expected to hold by extension.

Having established the conceptual rationale for including each variable in the model as predictor of payday lender outlet location, the next step of the process was to ready the model for testing. The equation that follows was estimated using the OLS multiple regression procedure:

$$\begin{aligned}
 Pdl\ outlets = & \beta_0 + \beta_1 (Bnk\ branches) + \beta_2 (Cu\ branches) + \beta_3 (Density) + \beta_4 (Age\ 15-39) \\
 & + \beta_5 (Aboriginal) + \beta_6 (Vis.\ Minority) + \beta_7 (No\ Diploma) \\
 & + \beta_8 (Unemployment) + \beta_9 (Low\ income) + \beta_{10} (Avg.\ family\ size) \\
 & + \beta_{11} (Avg.\ Hhld\ inc.) + \beta_{12} (Median\ hhld\ inc.) + \beta_{13} (Lone\ parent) \\
 & + \varepsilon
 \end{aligned}
 \tag{1}$$

where *Pdl outlets* is number of payday lender outlets per census tracts per capita (per 100 population),

β_1 (*Bnk branches*) is number of bank branches per census tract per capita (per 100 population),

β_2 (*Cu branches*) is number of credit union branches per census tract per capita (per 100 population),

β_3 (*Density*) is census tract population density,

β_4 (*Age 15-39*) is percentage of population between 15–39 years,

β_5 (*Aboriginal*) is census tract percentage of population with Aboriginal identity,

β_6 (*Vis. minority*) is census tract percentage of population with visible minorities,

β_7 (*No diploma*) is census tract percentage of population 15 years and over with no certificate, degree or diploma,

β_8 (*Unemployment*) is census tract unemployment rate (15 years and over),

β_9 (*Low income*) is census tract prevalence of after tax low-income economic families,

β_{10} (*Avg. family size*) is census tract average number of persons per census family,

β_{11} (*Avg. hhld inc.*) is census tract average household income,

β_{12} (*Median hhld inc*) is census tract median household income, and

β_{13} (*Lone parent*) is census tract percentage of lone parent (male and female) families.

The null hypothesis states that the independent variables selected have no association with the dependent variable, therefore the regression coefficients are equal to zero:

H_0 Variables $X_{1,2,3,4,5,6,7,8,9,10,11,12,13}$ have no effect on Y or $\beta_{1,2,3,4,5,6,7,8,9,10,11,12,13} = 0$

The null hypothesis is presumed to hold unless evidence produced by the test invalidates it in favour of the alternative hypothesis, which states that the association is significantly different from zero:

H_A Variables $X_{1,2,3,4,5,6,7,8,9,10,11,12,13}$ have an association with Y or $\beta_{1,2,3,4,5,6,7,8,9,10,11,12,13} \neq 0$

The first iteration of the model provides results for the case in which payday lender outlets per hundred capita is the dependent variable for years 2001 and 2006 separately, followed by results for the pooled data set where data from 2001 and 2006 are pooled. Pooling the data increases the number of observations and summarizes the average effect of each variable for the two years (Gujarati, 2003). The second iteration gives results of the case in which bank branches per hundred capita is entered as the dependent variable, and the final iteration reflects the case in which credit union branches per hundred capita is the dependent variable. In each of the latter

two cases, the payday lender density variable was then included in the set of independent variables to determine its association with the location of bank and credit union branches.

CHAPTER 4: ANALYSIS AND RESULTS

4.1 GENERAL DISTRIBUTION TRENDS OF PAYDAY LENDERS AND MAINSTREAM BANKS

4.1.1 General Distribution Trends of Payday Lenders and Mainstream Banks by Decade

Historical trends in the geographic distribution of payday lender, bank and credit union sites over the last three decades in Winnipeg, Brandon, Dauphin, Portage and Thompson, are described in this section. Winnipeg trends will be reported first, followed by trends observed in the rural Manitoba study sites. For the purpose of illustration, the Winnipeg table and corresponding maps divide the city into the inner-city and suburbs.

The total number of banks, credit unions and payday lender locations in Winnipeg in 1985, 1995 and 2009 is presented in Table 1. In comparing years 1985 and 2009, bank branches have declined from 184 in 1985 to 119 in 2009, representing more than a 35 percent decline. The number of credit unions increased substantially during this period from 39 in 1985 to 68 in 2009, representing a 75 percent increase. The first payday lender, beginning primarily as a cheque-casher, was Money Mart in 1988 when one outlet was identified. The number of payday lender outlets grew to three locations in 1995, and rose sharply to 62 by 2009.

Bank branch numbers saw their greatest decline in the inner-city, from 38 branches in 1985, down to 13 by 2009. Credit union branches, on the other hand, saw only a slight decline in the inner-city, maintaining around a dozen branches throughout this period. Payday lenders originated in the inner city and by 2009 were disproportionately represented there relative to

banks and credit unions, but have quickly expanded their network beyond the inner city to suburbs and rural communities.

Maps for the years 1985 (Figure 1), 1995 (Figure 2) and 2009 (Figure 3), illustrate the trend and highlight the migration of mainstream banks from the inner city and the arrival of payday lenders (operating as cheque-cashers at the time) to the area. However, closer examination of intervening years reveals finer detail that helps to explain some of the factors behind the overall trend.

i. The 1980s: US-based Money Mart appears in the late 1980s as a cheque-casher in the inner city while mainstream banks migrate to the suburbs

The 1980s witnessed a movement of mainstream banks from the inner-city to the suburbs and US-based Money Mart appears in the late 1980s as a cheque-casher in the inner-city. Despite the recession of the early 1980s, the decade is marked by a significant suburban expansion for the banks, although it coincides with the closure of many branches in Winnipeg's core. Closures are replaced almost one to one by newer branches built in suburban areas throughout the city.

Credit unions, on the other hand, show a steeper decline during this period. More branches closed or merged operations in the city than were opened. The rationalization of the network occurs mainly in the core business district whereas new branches are opened in suburban neighbourhoods.

It is in the midst of the migration of mainstream banks to the suburbs that Money Mart appears in what was then its capacity as a cheque casher (Figure 4). The first Money Mart

appears in Winnipeg in 1988 with two locations in the inner city. One of the two locations closes later that same year. There are no further openings until 1991.

ii. The 1990s: Money Mart continues its expansion as deregulation and technology reduce number of bank branches and redefines the role of credit unions.

The 1990s are characterized by a decline in the number of bank branches in the inner-city, some important changes in the role of credit unions, and the expansion of Money Mart outlets. There is a continued trend of bank branch closures in the downtown core and inner-city neighbourhoods during the decade. There is also evidence of closure in declining neighbourhoods in other parts of the city, such as the original cores of Transcona and St. Vital. New bank branches are observed to be opening throughout the city, but at half the rate seen in the 1980s. Net closures, on the other hand, are found to be much greater than in the previous decade. The number of bank branches in the inner-city continues to fall, and the total number of branches in Winnipeg shows a marked decline. Credit unions hold their position, posting a slight gain in number of locations during this time.

In contrast, Money Mart is seen to expand its network to include five more outlets over the same duration (Figure 5). Close examination of the map series shows that the Money Mart locations were originally located next to a stretch of banks and credit unions in the inner city. At the end of the 1990s, distance band analysis shows that of the seven payday lenders in the city, all but one were located within 1,000 metres of a bank, and three were located within 250 metres of a bank. Over time, the numbers of neighbouring mainstream banks begins to thin out and gradually disperse, eventually leaving Money Mart on its own.

iii. The 2000s: Payday lenders multiply and expand their reach, bank branches continue to decline in number and credit unions concentrate through merger activity

Mainstream banks continue to close branches, the number of credit union branches increased even as the number of entities decline through merger activity and payday lender outlets and firms rapidly multiplied.⁴⁵ Net bank branch closures in the city are greater in the 2000s than they were the previous decade, with more branches coming out of shopping centres and into stand-alone buildings located near big box stores. The total number of bank branches decline from 167 in the mid 1990s to 119 by 2009 representing 48 closures, occurring in mainly older neighbourhoods. The number of inner-city branches drop further from 30 to 13 during the period. In comparison, this period is marked by intense credit union merger activity; many branches close or merge operations, and other locations open or are operating under a new banner for a net gain of 12 new branches in the city. The number of credit union entities drop as the wave of merger activity increases.⁴⁶

The timing of these mainstream bank developments coincides with the sudden appearance and rapid growth of the number of payday loan operators and outlets in Winnipeg, as well as other regions of the country. Changes to consumer finance legislation during the late 1990s in

⁴⁵In Manitoba, the closure trend among particular banks varies. Examination of the historical distribution of branches reveals thirty years ago, the Royal Bank and CIBC operated the greatest number of branches in the province with 103 and 81 branches, respectively. Over the past two decades, CIBC and the Bank of Montreal experienced the greatest decline in number of branches, with CIBC reducing its network from 81 to 50 branches and the Bank of Montreal reducing its branch inventory from 69 to 38 locations. The Royal Bank remained stable, registering only a slight decline. The Toronto Dominion is the only bank to grow its network by merger in this time, acquiring Canada Trust in 2001, and boosting its local presence with the addition of a dozen branches.

⁴⁶ Assiniboine Credit Union, Cambrian Credit Union, Civic Credit Union, Westoba Credit Union and Sunova Credit Union have been dominant in terms of acquisitions and are now the largest in the province and among the top third in the country. Steinbach Credit Union is an exception. With just three locations, it is the eighth largest credit union in the country as measured by size of assets (Credit Union Central of Canada, 2008).

several US states allowed Money Mart — along with other multi-service cheque-cashers — to expand their product offerings to include the more profitable payday loan, which requires the borrower to have a job and a bank account held at a depository institution. Through the mid and late 2000s, new payday lender locations crop up in the suburbs, often in more moderate income areas across the city and province and in direct proximity to mainstream banks.

Money Mart is observed to continue the expansion of its network in Winnipeg through this period, joined by many others in the industry as new entrants begin to test the market in 2000 (see Figure 3). Although a number of independently-owned outlets open for business in the early 2000s, nearly half close or disappear after a year or two of operation. By 2009, 68 percent of 62 mapped locations in Winnipeg are controlled by the “Big 3” national firms. Edmonton-based Cash Store Financial (Instaloans and Cash Store) are operating 20 locations in the city, compared to US-based Money Mart with 17 outlets and the newest entrant from across the border, National Cash Advance, establishing seven locations over a two-year period beginning in 2008.⁴⁷

iv. Selected rural Manitoba observations: A period of relative geographic stability among banks and credit unions does not deter arrival of payday lenders

The number of bank, credit union and payday lender branches by rural location for the years 1985, 1995 and 2009 is depicted in Table 2. A review of the data indicates relative stability in the numbers of banks and credit unions located in Brandon, Dauphin, Portage and Thompson over this period. The numbers of bank branches remain fixed whereas the numbers of credit union branches actually increase by seven, with three new locations in Brandon, two in Portage

⁴⁷ The location database was sorted by lender and year to facilitate a time series analysis for years 2000 to 2009. Mapped results are available by contacting the author.

and one each in Dauphin and Thompson. Increasing numbers of credit union locations is consistent with the trend observed in Winnipeg during this period. However, stability of the numbers of bank branches in these areas differs from the steep decline observed in Winnipeg.

Despite the more stable presence of mainstream banks in these four larger rural centres, the entry and further expansion of cheque cashers or payday loan operators is not deterred. In fact, the rural study sites exhibit similar patterns in terms of the industry's emergence and expansion (Figures 6 and 7). As a general rule, Fastcash Company and City Cash Company appear to have pioneered payday lending in the rural markets in the late 1990s with one or two locations in select communities throughout the province. However, Cash Store Financial was not far behind, having opened two locations in Brandon in 2002 and 2003. Money Mart joined them in 2004 and National Cash Advance opened its first rural Manitoba location there in 2007. These three dominant players appear to have crowded out the smaller franchises and have come to rule the Brandon market. Similarly, Cash Store Financial and Money Mart are observed to control the market in Portage la Prairie, although they are later entrants, arriving in 2006 and 2007 respectively. Of the two known payday lenders operating in Dauphin, one is the Fastcash Company and the other is Cash Store Financial, which appears to have opened its doors in 2007. There are two Cash Store Financial locations in Thompson.

4.2 RESULTS OF HYPOTHESIS TESTS

i. Pearson's chi-square goodness-of-fit test results

Hypothesis 1: Payday lenders are disproportionately located in lower-income neighbourhoods versus above-average income neighbourhoods.

Figure 8 depicts the city divided into the three classes for the corresponding chi-square test. Results are presented in Table 3. The comparison of observed and expected counts reveals that there were 37 payday lender sites in below average income areas (more than the 27.3 sites expected if the proportions between the 3 types of institutions were equal), 2 in above average income areas (versus 8.5 expected) and 3 in non-residential areas (versus 6.2 expected). In contrast, 68 bank branches were located in below average income areas (versus 79.2 expected), 33 were in above average income areas (versus 24.8 expected) and 21 in non-residential areas (versus 18.0 expected). Credit union branches, on the other hand, were all close to the expected counts. Based on the chi-square test, the .01 critical value of chi square with 4 df = 13.28. The calculated value of 15.168 exceeds this threshold; therefore the null hypothesis is rejected and the alternative hypothesis accepted with 99 percent confidence.⁴⁸

⁴⁸ Payday loan borrowers are often characterized as low to modest-income earners, many of whom face credit challenges that prevent them from seeking loans from mainstream financial institutions. To the extent that payday lenders offer alternative solutions to conventional loans, the possibility that they choose to locate in pockets where the concentration of credit-challenged borrowers is highest was briefly examined using a measure called the "consumer risk predictor" (CRP). According to Equifax Canada, the CRP is a generic delinquency risk score that predicts the likelihood of a consumer having a 90+ day delinquency or bankruptcy within two years. Results showed that there were more payday lender outlets than expected in areas with lower CRP scores. In comparison, there were a few less banks than expected in areas with lower CRP scores. Again, credit union branches were close to the expected values.

ii. Distance bands analysis results

Hypothesis 2: Payday lenders are solely located in areas where there is an absence or reduced presence of banks and credit union branches.

The number and percentage of payday lenders in Winnipeg that were (1) within one kilometre (and, therefore, also within 250 metres), (2) within 250 metres, and (3) farther than one kilometre from a bank branch or credit union is calculated using distance band analysis. Table 4 presents the results for years 2000, 2005 and 2009. Beginning with bank branch proximity, nearly 43 percent of payday lenders were found within 250 metres of a bank branch, and more than 85 percent were within 1,000 metres in 2000. The trend is steady throughout 2005 and 2009, although there is a slight increase in the number and percentage of payday lenders farther than one kilometre from a bank over the period. As the earlier trend analysis showed, this is due, in part, to the number of bank branch closures that occurred during this period.

The story is somewhat different for credit union proximity. In 2000, just over 14 percent of payday lenders were found within 250 metres of a credit union branch, but nearly 86 percent were within 1,000 metres. By 2009, the trend begins to reverse and more payday lenders are found within 250 metres of a credit union (32.3 percent) with 79 percent of them within one kilometre. A similar pattern to that of bank proximity is found with a slight increase in the number of payday lenders located farther than one kilometre from a credit union. Again, the trend analysis illustrates that the trend has as much to do with the movement of credit unions as it has with payday lenders.

However these trends have come about, the results of the distance band analysis convey the evidence does not support the hypothesis that payday lenders are solely located in areas of the city where there is an absence or reduced presence of bank and credit union branches. The evidence instead suggests that more than 80 percent of payday lender outlets are located within one kilometre of a mainstream bank branch.

iii. Descriptive analysis

Tables 5 and 6 present average characteristics for Winnipeg census tracts (2001 and 2006) using factors related to the demand for payday loan services, categorized by presence of payday lenders, banks, credit unions, or some combination. The most common category is tracts that have no payday lenders, banks or credit unions, accounting for 48 percent of all tracts in 2006, up from 45 percent in 2001. The second most common category is for a tract to have only a bank, accounting for 20 percent of all tracts in 2006, down from 25 percent in 2001. Of the remaining tracts, those with only payday lenders account for nine percent of all tracts in 2006, up from two percent in 2001. Census tracts with a combination of only banks and payday lenders account for another six percent in 2006, up from two percent in 2001. Tracts with a combination of banks and credit unions account for eight percent of the total, down from 17 percent in 2001. Credit unions only account for four percent, down from six percent in 2001. Finally, census tracts containing all three types account for only four percent of all tracts in 2006, up one percentage point from 2001.

In both years, census tracts without any type of bank, credit union or payday lender closely resemble the average characteristics for the city as a whole along most dimensions. The

exceptions are that average and median income are higher, and proportion of low-income families is lower, reflecting suburban residential neighbourhoods with little to no commercial activity of any type. For the most part, tracts having only banks also mirror the city averages save for slightly higher average and median household incomes, a lower proportion of lower-income economic families, a greater level of education and a lower percentage of unemployed persons.

In contrast, tracts containing only credit unions emerge as somewhat unique. Although fairly comparable to bank only tracts in 2001, five years later census tracts containing only credit unions stand out in terms of high population density, an older population relative to its bank counterparts, a much higher share of Aboriginal residents, comparatively less education, significantly lower incomes, higher unemployment and the highest overall percentage of lower-income families. This pattern may be reflecting the tendency of credit unions to maintain original locations in neighbourhoods closer to the city centre that directly serve their membership, given a limited inter-branch banking system compared to the larger and more extensively networked banks. In tracts where banks and credit unions are co-located, characteristics tend to occupy more of a middle ground; that is, these tracts not as affluent as bank-only neighbourhoods, but not as distinctive as the characteristics of a credit union-only tract either.

One of the concerns with the rapid expansion of the payday loan industry is that non-bank lenders are filling a spatial void in neighbourhoods where mainstream banks are not physically present. However, in the city of Winnipeg in 2006, only nine per cent of census tracts without a bank or credit union have a payday lender outlet. Since 2001, new payday lender outlets are

increasingly found in tracts with bank and credit union branches. Nevertheless, census tract neighbourhoods without mainstream banks but with a payday lender have several distinguishing characteristics. These payday lender-only areas have higher than average population densities; higher unemployment, lower socioeconomic status, and less education as well as a higher proportion of Aboriginal residents within their population. On the other hand, census tracts that contain both banks and payday lenders have lower than average population densities, lower unemployment, higher incomes, improved socioeconomic status, more education and a lower proportion of Aboriginal residents.

The descriptive analysis offers added insights into the factors commonly linked to the location of payday lenders, and by extension, banks and credit unions. Next, regression analysis is used to weigh the relative importance of each factor in explaining the observed location patterns found in this study.

iv. OLS multiple regression test results

Table 7 presents initial modelling results for payday lender outlets and, alternatively, bank and credit union branches for 2001, 2006 and the pooled dataset. The adjusted R-squared values are higher for banks and credit unions than for payday lenders. Results suggest that the independent variables do a better job explaining mainstream bank than they do payday lender location. Turning first to the payday lender regression, the adjusted R-squares show a decline from 35.1 percent in 2001, to 27.5 percent in 2006 and 20.3 percent in the pooled data. The bank and credit union regressions, on the other hand, lead to adjusted R-squared results that are more similar to each other in both years and explain more of the variation. In 2001, the bank and credit

union adjusted R-square values are 51.0 percent and 51.9 percent, respectively. In 2006, the bank adjusted R-square result is 55.6 percent whereas the credit union adjusted R-square is 38.4 percent. Pooled adjusted R-squares for the bank regression are 38.7 percent and 39.2 percent for credit union branches.

Overall, the performance of the payday lender, bank and credit union regressions based on Equation 1 provide some measure of explanation; however, the numbers of variables which are statistically significant vary in each case.⁴⁹ An effort was made to detect any evidence of multicollinearity.⁵⁰ Thus, the median household income variable was removed due to a large VIF factor, and insignificant variables not meeting a minimum of .10 level of statistical significance were dropped from the equation, and the model recalculated. The number and type of variables removed varied from year to year and according to the dependent variable used in each version of the regression. The adjusted R-squares in each case remained relatively stable with only small declines in value (Table 8).

Payday lender outlet regression results

In 2006, the regression was recalculated based on three statistically significant independent variables: number of bank branches per 100 population (Bnk branches), number of credit union

⁴⁹ Relationships are assumed to be primarily linear. Error-checking and verification procedures were carried out to ensure that the data were accurately recorded; therefore any outliers are considered valid and have not been removed from the model.

⁵⁰ Each explanatory variable was tested for redundancy through the computation of variance inflation factors. The VIF shows the degree to which other coefficient variances and standard errors are increased by including that particular variable value (Miles & Shevlin, 2001). If the VIF value was large (greater than 10), then a problem with multicollinearity was suspected and the problem variable was removed.

branches per 100 population (Cu branches) and the unemployment rate (Unemployment). The F-test for overall significance of the model, $F(3, 165) = 22.0$, $\text{Prob} > F = 0$ suggests that the null hypothesis can be rejected with 95.0 percent confidence. The three variables produced an adjusted R-square of 27.3 percent, representing a slight decline from 27.5 percent in the original equation. The variables remain relatively stable in terms of their t-values. The number of bank branches per census tract per capita variable t-value increased from 3.13 to 3.20, which is significant at the .01 level, the number of credit union branches per census tract per capita variable t-value increased from 3.33 to 3.75, also significant at the .01 level, and the census tract percentage of population unemployment rate variable t-value declined slightly from 2.6 to 2.24, significant at the .05 level. As an added precaution, another test for multicollinearity was performed and no problems were detected.

The same procedure was followed for the 2001 data set. The model was recalculated based on three statistically significant independent variables: number of bank branches, number of credit union branches and prevalence of low-income after-tax economic families. The adjusted R^2 declined only slightly from 35.10 per cent in the original equation to 34.45 per cent in the revised model ($F(3, 165) = 30.47$, $p = .01$). The number of bank branches per census tract per capita variable t-value decreased from 3.30 to 2.20, $p < .05$, the number of credit union branches per census tract per capita variable t-value increased from 4.15 to 5.18, $p < .01$ and the census tract prevalence of low-income after-tax economic families variable t-value increased from 2.16 to 3.15, $p < .01$. As before, another test for multicollinearity was performed and no problems were detected.

The result of the pooled data set regression summarizes the average effect of each variable for the two years, 2006 and 2001. The model was recalculated based on five independent variables: number of bank branches per 100 population, number of credit union branches per 100 population, unemployment rate, prevalence of low-income after-tax economic families, and percentage of lone-parent families. The adjusted R-square value of 18.28 percent, declined slightly from the 20.04 value produced in the original equation. The number of bank branches per census tract per capita variable retained its significance at the $p < .01$ level with a t-value of 3.84; whereas, the number of credit union branches per census tract per capita variable increased in significance from the $< .10$ level with a t-value of 1.81 to the $p < .05$ level with a t-value of 2.13. The values of the remaining variables remained relatively stable in comparison to the original equation. The census tract unemployment rate variable t-value is 2.82 and is significant at the $< .05$ level, the census tract prevalence of low-income after-tax economic families variable t-value is -2.21 and is significant at the $< .05$ level, and the census tract percentage of lone-parent families variable t-value is 1.88 and is significant at the $< .05$ level.

In assessing each explanatory variable in the model, variables which have a strong positive and statistically significant association with payday lender outlet density will be discussed first. Beginning with the number of bank branches per census tract per capita variable, $\beta = 0.016$ in 2001, 0.081 in 2006 and 0.060 when the data are pooled. Here, the value of the coefficient at 0.060 suggests that, per 10,000 population, if the number of bank branches increases to 100, then the number of payday lender outlets increases to six during the period 2001 to 2006 holding all other explanatory variables constant. In this case, $t = 3.84$, $p = .002$ and given the sample size of

169 observations less 3 degrees of freedom, the null hypothesis can be rejected with 99.9 percent confidence in favour of the alternative hypothesis.

Examination of the number of credit union branches per census tract per capita variable in 2001 shows $\beta = .07$, $t = 5.18$, $p = .000$. In 2006, $\beta = .33$, $t = 3.75$, $p = .000$. The positive relationship between the number of payday lender outlets per census tract per capita and number of credit union branches per census tract per capita holds when the data is pooled, where $\beta = .072$, $t = 2.13$, $p = .05$. Here, the value of the coefficient at 0.07 suggests that, per 10,000 population, if the number of credit union branches increases to 100, then the number of payday lender outlets increases to 7.0 during the period 2001 to 2006 holding all other explanatory variables constant.

A third variable in the model which has a strong positive relationship with payday lender outlet density is census tract unemployment rate, but only in 2006 and in the pooled equation. In both cases, $\beta = 0.002$, $t = 2.24$, $p = .03$ and $t = 2.82$, $p = .005$ respectively.

A fourth variable showing a positive and statistically significant association with payday lender outlet density is prevalence of low-income families, but only in 2001, $\beta = .0001$, $t = 3.15$, $p = .002$. However, when the data for both 2001 and 2006 are pooled, the variable had a negative relationship, $\beta = -.0004$, $t = -2.21$, $p = .027$. Even though the prevalence of low-income families as a neighbourhood characteristic shows a strong, positive association with payday lender outlet location in 2001, the average effect of the variable on payday lender outlet density for the two years is negative.

A fifth and final variable showing a positive and statistically significant association with payday lender outlet density is incidence of lone-parent families, but only in the pooled dataset, $\beta = .001, t = 1.88, p = .060$.

Bank Branch Regression Results

In the case of bank branches, the explanatory power of the regression equations was stronger, and there were four variables that were statistically significant in 2001 (adjusted $R^2 = 46.2$ percent, ($F(4, 164) = 37.07, p = .01$), seven in 2006 (adjusted $R^2 = 46.5$ percent, ($F(7, 161) = 21.87, p = .01$), and eight in the pooled data equation (adjusted $R^2 = 39.38$ percent). Not unexpectedly, the number of bank branches in a census tract was positively and significantly related to the number of credit union and payday lender outlets in 2001 and 2006, although the statistical significance of the average effect of the payday lender density variable for the two years disappeared in the pooled result. The coefficient estimates for each period are quite different, so the relationship is changing through time and the variable may estimate poorly the combined effect of each time period.

Another independent variable that showed a significantly positive association with bank branch density in 2001, 2006 and the pooled result was the percentage of population between 15 and 39 years. The percentage of the population with Aboriginal identity variable was also positive and statistically significant, but only in 2006 and in the pooled dataset.

Unlike the payday lender regression results, there were a number of significantly negative associations of the independent variables with bank branch density. Highly significant and

negatively correlated factors included the percentage of the population 15 years and older with no certificate, diploma or degree, but only in 2001 and in the pooled equation. In 2006, the prevalence of low-income families, average household income and percentage of lone-parent families variables were all negatively associated with bank branch density, but were not significant factors in 2001. Two of these variables, census tract average household income and census tract percentage of lone-parent families, were also negatively and significantly related in the pooled equation. In addition, population density and average number of persons per census family variables had a negative influence on bank branch density, strongly so in the pooled data equation.

Credit Union Regression Results

In the case of credit union branches, the explanatory power of the regressions was also stronger than that offered by the payday lender equations. Here, two variables were statistically significant in 2001 (adjusted $R^2 = 47.1$ per cent, ($F(2, 166) = 37.07, p = .01$), three in 2006 (adjusted $R^2 = 36.6$ per cent, ($F(3, 165) = 21.87, p = .01$), and five in the pooled data equation (adjusted $R^2 = 39.84$ per cent). The number of credit union branches in a census tract was positively and significantly related to the number of payday lender outlets and bank branches in 2001 and 2006; however, the statistical significance of the average effect of the payday lender density variable for the two years disappeared in the pooled equation.

In fact, the only independent variables showing any significance in 2001 were the payday lender density and bank branch density variables. Like the 2006 payday lender regression equation, density of the other two types of financial institutions along with the unemployment

rate showed a strong and positive relationship in that year. In terms of the pooled equation, the bank branch density, percentage of population 15 years and over with no certificate, diploma or degree, and average household income variables were positively and significantly associated with credit union branch density.

One independent variable in the pooled dataset appeared to have a significantly negative relationship with credit union branch density: average number of persons per census tract family.

4.2.1 Summary of OLS Multiple Regression Analysis

Results from the final payday lender density regression model showed that approximately a quarter to a third of the variation in the dependent variable in 2001, 2006, and a fifth in the pooled dataset, could be explained by the independent variables. In particular, the bank and credit union branch density variables appeared to have a strong positive and highly significant relationship with the dependent variable, number of payday lenders per census tract (per 100 population).

To a degree, these results are consistent with the expectations outlined at the outset of the exercise. Bank and credit union branch density was predicted to have a significant correlation with payday lender location, although the expectation was that the relationship would be negative in 2001, reflecting greater density of payday lender outlets in the inner-city compared to mainstream banks. The strength of any such relationship was expected to diminish by 2006 as more payday lender outlets began to locate beyond the inner-city and in proximity to mainstream banks. Although the results of both years show a positive relationship, the strength of the relationship is increased over the study period.

As predicted, the prevalence of low-income economic families was positively related to payday lender outlet density, particularly in 2001. Over time, the strength of the correlation was expected to lessen as payday lenders began to locate beyond the inner city to promote a product aimed at salaried borrowers with bank accounts. Indeed, the prevalence of low-income families disappears as a significant factor in 2006, and emerges in the pooled equation as a negative influence, reflecting the change in pattern in terms of the average effect for the two years.

On the other hand, the unemployment rate variable was expected to have a negative relationship with payday lender outlet density, given that payday loan consumers are more likely to be employed than unemployed given the nature of the product. But the unemployment rate was not a significant factor in 2001. That the variable is significantly positive in 2006 is an interesting, if unexpected result, given that payday loan consumers must have a job to qualify. However, unemployment insurance cheques are also accepted as regular income (but not family allowance or welfare cheques).

The percentage of lone-parent families' variable was shown to have a positive and statistically significant relationship with payday lender outlet density in the pooled equation, but not in 2001 or 2006. A positive relationship was anticipated on the basis of research that finds lone-parent families are more prevalent in lower-income Winnipeg neighbourhoods, where payday lender outlets are more densely located.

When payday lender density was exchanged with bank branch density as the dependent variable, nearly half of the variation was explained by the independent variables, compared to only a quarter or a third of the payday lender variation. This outcome is perhaps owing to the fact

that there are many more bank branches than payday lenders resulting in more observations.⁵¹

Bank networks have also been around for much longer and have grown with the city, and therefore, contain a greater mix of branches in a wider variety of neighbourhoods.

Nevertheless, the similarities in this case are that payday lender and credit union density variables emerge as significantly and positively correlated with bank branch location in 2001 and 2006. What is different is the number of independent variables showing a significantly negative correlation with the dependent variable that is most pronounced in the pooled equation. Here, the average effects of the population density, percentage of population 15 years and older with no certificate, diploma, or degree, average family size, average household income and percentage of lone-parent families variables on bank branch density for the two years are significantly negative. The evidence suggests that bank branches are predominantly located in suburban areas whose residents carry more education and in neighbourhoods more typically inhabited by smaller, two-parent families, which is consistent with the descriptive analysis results and previous findings contained in this study.

One factor that displays a significantly positive relationship with bank branch density in 2001, 2006 and in the pooled equation is the percentage of population between 15 and 39 years.

⁵¹ Note:

| Number of Payday Loan Outlets | | Number of Bank Branches | | Number of Credit Union Branches | |
|-------------------------------|------|-------------------------|------|---------------------------------|------|
| 2001 | 2006 | 2001 | 2006 | 2001 | 2006 |
| 14 | 45 | 133 | 118 | 59 | 41 |

The relationship between the age variable and bank branch location suggests that banks are primarily in areas that feature a higher percentage of younger residents under the age of 40, those most often associated with the builder stage of the life cycle and who may rely more heavily on credit and mortgage financing.

In the final version of the regression series, credit union branch density was used as the dependent variable. Here, adjusted R-squares ranged between 40 and 50 per cent. Similar to the preceding cases, payday lender density and bank branch density were significantly and positively correlated with credit union density in 2001 and 2006. Different from the bank branch regression case, but comparable to the payday lender version, the unemployment rate had a positive association with credit union branch location in 2006.

The results of the credit union density pooled equation showed significantly positive associations with census tract characteristics that included the percentage of the population 15 years and over with no certificate, diploma or degree, prevalence of low-income economic families, and average household income. In this way, credit union density appears to be somewhat comparable to payday lender density, in terms of the types of socioeconomic variables characteristic of location. Only one variable demonstrated a significantly negative relationship with credit union location: average numbers of persons per census family, which may reflect the tendency of credit unions to maintain original locations in older neighbourhoods or areas closer to the city centre that serve their membership.

Overall, the results of the regression exercise lend directional support to the mapping observations, descriptive analysis and hypothesis test findings included in this study.

CHAPTER 5: DISCUSSION AND CONCLUSIONS

5.1 INTRODUCTION AND OVERVIEW OF THE CHAPTER

In this chapter, the results obtained in the study, contributions, limitations, and areas for future research are outlined. The chapter has four major sections. The results of the study, comparing its findings with previous research, are outlined in the first two sections. The conceptual, methodological and practical contributions offered by the study are highlighted in the third section. In the final section, limitations in the current study that may provide opportunities for future research are discussed.

5.2 CONCLUSIONS

What are the geographic location patterns of the payday lending sector and the network of mainstream bank branches in the province of Manitoba, and how have they varied over time? The analysis was carried out using payday lender, bank and credit union location data in Winnipeg and four rural Manitoba sites over a thirty-year period from 1980 to 2009. Results of the historical trend analysis show that the total number of mainstream bank branches has declined in the city of Winnipeg, leaving geographic gaps that are more pronounced in the inner-city. The number of payday loan outlets has rapidly increased from their first appearance in the inner-city during the late 1990s through the 2000s. The mapping exercise finds that payday lenders often locate near banks and credit unions; however, they are sometimes isolated when nearby bank or credit union branches are closed or merged with operations elsewhere in the city.

The results of the historical trend analysis of the city of Winnipeg differ from the location patterns of mainstream bank branches in Brandon, Portage la Prairie, Dauphin and Thompson, which showed more stability during the study period. Despite the relative stability of numbers and locations of bank and credit union branches in rural Manitoba hub communities, three major payday lender companies that first developed a presence in the city were observed to establish and increase the numbers of outlets in these centres during the early to mid 2000s.

Is there empirical support for the claim that payday lenders concentrate in poorer neighborhoods in the absence of mainstream bank branches as compared to well-banked, above average-income neighborhoods? Results of the Pearson's chi-square goodness-of-fit statistical procedure provide empirical support for the hypothesis that payday lenders are disproportionately located in lower-income neighbourhoods versus above average-income neighbourhoods (H1). Average household income, at the neighbourhood dissemination area level, was employed to examine if there was a statistically different density of payday lenders in lower-income neighbourhoods as compared with above average-income neighbourhoods. Although payday lenders were not found to be exclusively located in low-income neighbourhoods, the test did confirm a different density of payday lenders and mainstream banks in below and above average income-areas.

Results of distance band analysis do not provide empirical support for the hypothesis that payday lender outlets are solely located in areas where there is an absence or reduced presence of banks and credit union branches (H2). The evidence suggests that the majority of payday lender outlets are found within one kilometre of mainstream bank branches. Newer, suburban payday

lender outlets were found to be exclusively located near mainstream banks. The exception is the inner-city, where payday lenders were found to be more prevalent and where mainstream bank branches are less densely located compared to suburban areas of the city.

To what extent do neighborhood demographic and socioeconomic characteristics explain the distribution of payday lender outlets and mainstream bank branches? Descriptive measures along with OLS multiple regression analysis were used to examine the location of payday lenders and the characteristics that make a census tract more likely to attract or repel them. The analysis focused on census years 2001 and 2006, representing a period of exponential growth of the payday loan industry and offers added insights into the factors frequently associated with the location of payday lenders, and by extension, banks and credit unions.

First, descriptive measures were employed to highlight census tract characteristics where various types and combinations of financial service providers were located during the period. In 2006, nine percent of census tracts without a bank or credit union were observed to have a payday lender outlet. However, since 2001, new payday lender outlets are increasingly found in tracts with bank and credit union branches. Census tract neighbourhoods without mainstream banks but with a payday lender have several distinguishing characteristics. These payday lender-only areas have higher than average population densities, higher unemployment rates, lower socioeconomic status, lower levels of education as well as a higher proportion of Aboriginal residents within their population. In contrast, census tracts that contain both banks and payday lenders have lower than average population densities, lower unemployment, higher incomes, improved socioeconomic status, higher levels of education and lower proportions of Aboriginal

residents. Newer outlets were found located near mainstream banks, away from the city centre in suburban markets.

Next, OLS multiple regression analysis was used to weigh the relative importance of each factor in explaining the observed location patterns found in this study. Although there is variation across the time periods examined, and among the three types of entities, a few general patterns emerge: (i) payday lenders, as well as banks and credit unions, are more likely to be located in geographic proximity to one another; (ii) in 2001, payday lenders were more likely to be located in areas with a larger portion of the population living below the low-income economic cut-off; (iii) payday lenders, over time, are less likely to be located in areas where a larger share of the population is living below the low-income cut-off; (iii) payday lender density, in 2006, is higher in areas with higher unemployment; (iv) bank branch density is lower in neighbourhoods with lower socioeconomic status; that is, a greater share of the population living below the low-income cut-off, higher incidence of lone-parent families, larger numbers of persons per census family, lower education levels and higher population density; and (v) credit union density is more closely related to socioeconomic factors associated with payday lender density than it is to bank branch density.

5.3 DISCUSSION AND SUMMARY

Among the types of research efforts that aim to explain the reason for the rapid growth of the payday lending industry, an institutional perspective rooted in politics, sociology and

economics assumes structures and processes embedded in locales, markets and policies are a factor in the delivery of financial services (Buckland, 2012). Therefore, the institutional context in which fringe and mainstream banks and consumers operate is considered important. Location studies in particular focus on the spatial void hypothesis (Smith, et al., 2008); that is, the shift in supply of traditional bank branch services as the explanation for the increase of non-bank financial service providers in poor and minority neighbourhoods. Here, researchers concentrate on structural barriers and the problem of geographic access to fully-regulated depository institutions by neighbourhood residents, and concerns about the potential for financial exclusion of vulnerable consumers (Buckland, et al., 2003, Buckland & Martin, 2005; Caskey, 1994; Dymski & Veitch, 1996; Graves, 2003; Leyshon & Pollard, 2000; Leyshon & Thrift, 1995; Sherraden & Barr, 2005). The role of the state is emphasized in this literature, often in the form of policy intervention, consumer protection measures and regulation of institutions to correct market inefficiencies and power imbalances believed to contribute to the problem of financial exclusion.

In contrast to the spatial void hypothesis, researchers are beginning to explore evidence that shows payday lender outlets and mainstream bank branches are increasingly co-located. The spatial complement hypothesis (Cover, et al., 2009) proposes that non-bank financial service providers and traditional financial institutions are not substitutes for one another, but instead serve different segments of the market in which they are situated. Each type appeals to a distinctive subset of the market for financial services and location decisions are not mutually dependent (Burkey & Simkins, 2004; Damar, 2009; Elliehausen & Lawrence, 2001; Smith, et al., 2008; Temkin & Sawyer, 2004).

Critics and supporters tend to characterize the industry according to the spatial void or the spatial complement perspective in a way that suggests they are mutually exclusive. Yet few studies have examined the long-term location patterns of payday lenders relative to mainstream banks for evidence of a corresponding shift in market strategy (Damar, 2009). Most past research into payday lenders and their locations relative to traditional bank branch networks has been carried out in the US, but any longitudinal studies that have examined the relationship between trends in the industry's location pattern and location of mainstream bank branches have not been located.

The shortage of spatial studies on the subject in Canada indicates a much more significant gap that this research project was designed to address. Accordingly, an empirical analysis of the shift in site location patterns of payday lenders relative to banks and credit unions in Winnipeg and rural Manitoba over the period 1980 to 2009 was conducted in this study. The data were used to examine the spatial void hypothesis to determine whether there was support for the claim that payday lenders are disproportionately located in lower-income neighbourhoods where traditional bank branches are absent or under-represented in proportion to the local population.

On the one hand, results in this study supported the hypothesis (H1) that payday lender outlets are disproportionately located in lower-income neighbourhoods versus above-average neighbourhoods. This result is consistent with studies that find payday lenders are more prevalent in neighbourhoods with a higher percentage of poor residents (Buckland & Martin, 2005, Buckland, et al., 2007, Caskey, 1994; Graves, 2003). On the other hand, results in this study did not support the hypothesis (H2) that payday lender outlets are found in geographic

isolation of mainstream banks, a finding that is consistent with studies that show payday lenders are disproportionately located in lower-income areas, but often in proximity to banks (Apgar & Herbert, 2004; Burkey & Simkins, 2004; Fellowes & Mabanta, 2008; Prager, 2009; Temkin & Sawyer, 2004).

Even so, this study found that payday lenders are not exclusively located in poor neighbourhoods. In fact, newer payday lender outlets were found located in growth markets well served by traditional financial institutions. In keeping with the spatial complement hypothesis, this evidence suggests that the industry's location strategy has evolved since its first appearance in the 1990s, reflecting growing demand by a sub-segment of consumers for its particular brand of financial services (Damar, 2009; Elliehausen & Lawrence, 2001; Smith, et al., 2008).

Further, the results of the payday lender regression model identify proximity to mainstream bank branches as having the most important relationship with payday lender outlet location, as compared to socioeconomic or demographic factors that are frequently hypothesized (H3) to influence location in the literature. One exception is the prevalence of low-income economic families correlated with payday lender location in 2001, which is consistent with the industry's origin in the inner-city. As expected, the strength of the relationship, as well as its sign, reverses as new outlets begin to locate beyond the inner-city. Another relates to the higher unemployment rates associated with outlet location in 2006, which is unexpected given borrowers must have a job to qualify for a loan. This finding raises the question of whether payday lenders in some locations depend more heavily on revenues associated with the exchange of unemployment insurance cheques as payday loan security or with basic transaction services, rather than the payday loan product. Alternatively, higher unemployment rates may be a market

characteristic common to older neighbourhoods or commercially zoned areas in which a particular mix of businesses operate.

The mapped data and historical trend analysis show that a single cheque-cashing firm that would later expand its product line to include payday loans and other transactional services first opened its doors in the inner city in 1988. Over the next decade, Money Mart would open a handful of outlets in the core area in retail clusters that included banks and credit unions. As mainstream banks began to pursue new markets in the suburbs, many neighbouring branches in the areas inhabited by cheque-cashers were closed. Money Mart and other non-banks were left behind to service the routine cheque-cashing, money transfer and bill payment needs of inner-city residents.

Over time, mainstream banks would continue to cull their branch networks, this time in response to pressures brought about by deregulation, technological advance and globalization. As banks began to retreat from the small, unsecured loan market in favour of new credit innovations, firms in the now declining cheque-cashing business began to include the payday loan in their product lines. By the year 2000, Money Mart would begin an aggressive campaign to expand its network beyond the inner city and was joined by new entrants that included several independents and two major domestic chains, Cash Store Financial and Cash Money.

The smaller, independent firms frequently changed hands and locations, and many of them did not survive (Brennan, et al., 2011; Robinson, 2006). The larger players with diversified product lines and well-capitalized parent companies, on the other hand, moved decisively and have come to dominate the urban Winnipeg market. Through the mid and late 2000s, new

payday lender locations cropped up in the suburbs, often in more moderate income areas across the city and province. This movement is consistent with a product offering that centers on the payday loan, which requires the borrower to have a job and a bank account held at a depository institution. It is also consistent with the trend toward ramped up household debt, creating financial pressures that conventional lenders may not be in a position to help alleviate. While more outlets in the last five years have been situated in the suburbs, there is still a positive relationship between payday loan location and lower income, a reflection of their early concentration in the inner-city and downtown core.

Determining the degree to which low-income residents living in the suburbs patronize local payday loan establishments cannot be determined on the basis of spatial analysis alone since it requires an understanding of the customer base and mix of business transacted at each location. The product array available through large payday loan companies means that, notwithstanding the industry's motives to target already banked, middle-income earners, it may in fact be serving a portion of poor and unbanked consumers for whom it is a substitute for conventional transaction services. The theoretical implication is that payday lenders offering a full product line that includes cheque-cashing services, cash cards and money transfers, in the absence of mainstream banks, could be viewed as a substitute for routine transaction services. Therefore, payday lenders in the inner-city may very well fit this conceptualization. On the other hand, payday lenders offering an alternative to conventional financing and who are located in the suburbs next door to banks and credit unions may be perceived as offering a niche product that is a complement to the full array of services offered by mainstream institutions.

The pattern in rural Manitoba is similar to the extent that companies like Fastcash or City Cash pioneered the cheque-cashing business until diversifying their product line to include payday loans in later years. In the early to mid 2000s, the large urban players began to appear in the rural hub communities of Brandon and Portage la Prairie, eventually extending their reach to Dauphin and Thompson. Cash Store Financial and Money Mart now control the majority of locations in these areas, with National Cash Advance appearing in Brandon in 2007. In examining the rural maps, it is difficult to discern or draw conclusions about the location strategy of payday lenders within a particular community. Although rural communities often do contain pockets of poverty, sometimes racialized due to higher proportions of Aboriginal or immigrant populations living on low incomes in certain regions (Bruce, Bruce, & Martin, 2007), payday loan outlets tend to locate along the main street or within one or two of a small number of available retail clusters that aren't necessarily reflective of local neighbourhood conditions. As larger centres, these rural hubs do draw traffic from surrounding towns and communities whose residents may depend on such services.

Although the four rural communities studied here have not experienced the same degree of bank branch or credit union closures as witnessed in Winnipeg, it is apparent that the Canadian payday loan industry has emerged and expanded in these communities to pursue or create a market for their services. On the basis of these limited observations, payday lenders do not appear to be filling an obvious spatial void and may be viewed as providing complementary services not available through banks or delivered in a way that is more convenient or less demanding of the borrower. Or, it may be that payday lenders tend a mix of business in rural areas that may be skewed toward the unbanked; that is, more cheque-cashing, utility payment,

cash card or wire services than those in parts of suburban Winnipeg. If that is the case, then payday lenders in rural Manitoba centres may be viewed as substitutes for some, and complements for others. More research investigating rural demographics, regional traffic patterns including spatial analysis of mainstream banks, retailers and employers in each municipality may provide further insights.

Most of the available research on payday lenders centers on their perceived role as substitutes for mainstream financial institutions in low-income neighbourhoods where physical access to bank branches is reduced or absent. As more and more payday lender outlets appear in mixed, suburban neighbourhoods and in rural communities next to banks and credit unions, new questions emerge. The idea that payday lenders may be operating as complements to the established banking system in Canada may be unremarkable in theory, but may have implications in practice that are worth considering from a regulatory point of view. As the industry expands to new markets, more Canadian households may be operating outside of the financial mainstream. Policy implications will be discussed as part of Section 5.5, Future Research and Policy Implications.

5.4 CONTRIBUTIONS OF THE RESEARCH

This research study contributes to the financial exclusion literature in three main ways: it extends the conceptual and theoretical understanding of the factors influencing the payday loan industry's phenomenal growth, its role within the Canadian financial system and its relationship to the established network of bank branches in the province of Manitoba; it provides additional

insight into the benefits of longitudinal analysis to fully capture the dynamics of historical or developing spatial relationships as part of overall trends across the sector; and it provides practical information for government policymakers, regulators and consumers about a sector of the Canadian economy that is of growing importance but remains poorly understood.

5.4.1 Conceptual Contributions

This research makes its most important contribution to the financial exclusion literature by providing an empirical understanding of the shift in site location strategies of payday lenders relative to banks and credit unions in the Canadian context, and how payday lenders, banks and credit unions have moved together in response to broad structural factors within the domestic and global economy. In tracing the origin and history of the payday loan industry from relative obscurity to well-banked suburban neighbourhoods in Winnipeg, as well as its expansion to four rural centers within the province of Manitoba, it provides an original account of its movement relative to mainstream banks over the study period, 1980-2009.

First, the study provides an elaboration and extension of previous research undertaken by local studies (Buckland, et al., 2003; Buckland & Martin, 2005) that examined the rise of fringe financial services in Winnipeg's North End low-income community. During the period 1980 to 2003, mainstream bank branches were observed to have decreased from 20 to 5 locations, while fringe bank locations were found to have increased from 1 to 18 in the inner-city. This research project builds on these findings to investigate the rise of the payday lending industry within and beyond inner-city neighborhoods to other areas of the city and province. As discussed in Chapter 2, spatial studies generally establish what appears to be a location bias on the part of fringe and

mainstream banks. To that extent, the results of this study support the claim from the institutional perspective that the supply of traditional banking services is weaker in poor neighbourhoods than it is in non-poor neighborhoods, and stronger in the case of fringe banks (Caskey, 1994; Graves, 2003; Leyshon, et al., 2008; Temkin & Sawyer, 2004; Leyshon & Thrift, 1995).

Second, the study of the Manitoba market contributes to spatial analyses found within the financial exclusion literature by providing measurement of the actual distance between payday lenders and traditional bank networks. Despite the differences in density of types of institutions in poor and non-poor neighbourhoods, payday lenders were generally not found in complete absence of traditional bank and credit union branches. In fact, distance band analysis showed that the majority of payday lenders are located within 250 to 1,000 metres of mainstream financial institutions. These results provide support to studies that show payday lenders are more densely located in lower-income areas, but often in close proximity to banks (Apgar & Herbert, 2004; Burkey & Simkins, 2004; Fellowes & Mabanta, 2008; Jones, et al., 2005; Prager, 2009; Temkin & Sawyer, 2004).

Third, this study provides an empirical understanding of the changing spatial relationship between payday lenders and traditional bank branch networks over time. Despite the finding that that payday lenders are more densely located in lower-income areas, the study reveals that payday lenders are not exclusively located in poor neighbourhoods. Moreover, newer payday lender outlets are found located in growth markets well served by traditional financial institutions. The entry and expansion of the payday loan industry beyond city limits is another indication of a shift in location strategy, given the relative stability of bank and credit union presence in Brandon, Portage la Prairie, Dauphin and Thompson. These are findings that lend

support to the argument that the industry's location strategy has evolved since its first appearance in the 1990s, reflecting growing demand by a sub-segment of consumers for a product not otherwise offered by mainstream banks (Damar, 2009; Elliehausen & Lawrence, 2001; Smith, et al., 2008).

Overall, the results of this study suggest that the spatial void hypothesis and the spatial complement hypothesis are not mutually exclusive concepts when applied to payday lender location patterns over time. Under certain conditions, payday lenders fit the conceptualization of bank substitutes; the inner-city of Winnipeg provides one such example where mainstream bank branches are in short supply. In cases where payday lenders are situated in well-banked growth markets, the conceptualization of them as niche-lenders offering services that complement those offered by banks and credit unions may have some validity.

5.4.2 Methodological Contributions

From a methodological perspective, this study illustrates that the dynamics of historical or developing spatial relationships between the payday loan industry and financial institutions are best understood using longitudinal data. Most location studies related to financial exclusion rely on a year's worth of sample data for a single market due to the challenges of assembling the required information (Fellowes & Mabanta, 2008). These studies have provided a useful understanding of the industry's geographic distribution at a single point in history. However, a longitudinal study that chronicles the emergence and expansion of the industry in a specified region reveals incremental movements that can be overlooked in a static portrayal of spatial patterns. The level of granularity afforded by this longitudinal study provides a deeper

understanding of the evolution of the payday lender sector and its relationship to the established financial services network.

Further, the analysis method used in this study relies on both inductive and deductive approaches, including a variety of statistical and descriptive techniques used to cross-examine the results of hypothesis tests. Mapped results were examined for evidence of spatial patterns and interpreted in the historical context of economic trends occurring in the industry and market, thus enriching information regarding observed changes. The results of the deductive approach, using methods that include Pearson's chi-square goodness-of-fit, measurement of bank proximity using distance band analysis, descriptive measures and OLS multiple regression methods show consistency in terms of key findings. The combined result of the overall approach overcomes the limitations of any single method that, on its own, could provide an over-simplified explanation of a complex phenomenon.

5.4.3 Practical Contributions

In addition to the conceptual and methodological contributions, this study has provided insights that may be of value to practitioners and policymakers. Location decisions taken by individual financial institutions in response to changing market conditions can have unintended consequences over the long term. Results indicate that it may be beneficial for members of the financial service industry, particularly banks and credit unions, to work together to ensure residents of especially vulnerable communities have adequate access to full-service branches. A precedent exists in the case of rural centres, where outgoing institutions will sell their book, or portfolio of business, to incoming institutions that then take up occupancy of the would-be

vacant branch.⁵² The cooperative effort has resulted in a more stable presence of fully-regulated, full-service bank and credit union branches, although, as this study points out, it hasn't stemmed the entry and expansion of payday lenders in these communities.

Another example that serves as an urban precedent is demonstrated by Assiniboine Credit Union, which recently announced it will open a branch in early 2012 in Winnipeg's North End (Sanders, 2011). The credit union's board of directors approved the new branch, conditional upon securing new business valued at a minimum threshold, which it achieved with support from local businesses and North End investors. Again, increased representation by bank and credit union branches is unlikely to reduce the number of payday lenders operating in the area, although it does improve access to regular banking services for residents as well as provide opportunities for employment.

Despite whatever willingness there may be on the part of Canadian financial institutions to work cooperatively to prevent or remedy problems of access to mainstream bank branches where they occur, policy makers may have a role to play in terms of identifying urban communities where the problem is most pronounced. Policy considerations as they relate to the payday loan industry itself follow in section 5.5.

5.5 LIMITATIONS OF THE STUDY

There are several limitations in the current study. These include issues related to data collection, methodology and sample selection. The first issue involves the difficulty of obtaining location data for payday loan companies. There is no official record of payday loan companies

⁵² In 2000, Bank of Montreal alone sold 14 branches in rural Manitoba to nine credit unions (CBC, 2000).

operating within Canada or the Province of Manitoba. Although a variety of sources were consulted to secure as comprehensive a record as possible and extra care was taken to authenticate the data, the availability of an authoritative record would have gone further to enhance its reliability.

Secondly, the methodology used in the study relies on a combination of inductive and deductive approaches, which acknowledges but does not specifically test for, spatial autocorrelation. In preparation for the regression exercise, a series of tests were performed using the average Nearest Neighbour Distance tool in GIS to determine whether the location patterns of payday lenders in Winnipeg in years 1999, 2002, 2005 and 2009 could be described as dispersed, random or clustered.⁵³ The results for each test year show that payday lender outlets appear in a dispersed pattern in 1999, a random pattern in 2002 and develop a clustered pattern by 2005. These are patterns that are easily observed on the accompanying maps (Figures 1-8). The strong cluster pattern as more payday lenders enter the market indicates a concentration of services in specific focal areas of the city; that is, main arteries associated with high traffic centres of both urban and suburban areas. Payday lenders are locating close to each other and in specific locations. This finding means that underlying spatial factors unique to commercial real estate is a complexity that challenges the assumption of independence among test variables.⁵⁴

⁵³ These years were selected to capture a greater range than previous tests in order to detect any shifts in pattern. The tool was used to measure the distance between each payday lender outlet and then averaged. In accordance with standard procedure, if the average distance was less than the average for a hypothetical random distribution, the distribution of payday lender outlets was considered to be clustered (Mitchell, 2005, p. 80). If the average distance was greater than the hypothetical random distribution, the pattern was considered to be dispersed.

⁵⁴ Spatial data is commonly positively spatially autocorrelated, which means high values tend to cluster near other high values, and low values near low values. Observations drawn from the immediate area cannot be deemed independent of one another, which violates a basic statistical assumption of classic regression models. (i.e., errors in

Another potential issue involves sample size. Although the sample size is based on 169 observations, just over half of the subject census tracts contain any combination of banks, credit unions or payday lenders. This brings into question the stability of the coefficients and the degree to which they could be replicated if another sample were drawn.

As such, there are inherent limitations that mean results should be interpreted with caution and in the context of research findings and test results particular to this study. The longitudinal design relies on more than one method to cross-examine results, supported by a detailed account of historical trends within the industry known to have influenced location over time (i.e., economic conditions, regulatory policies, technological advancement). The most important of these and their implications for outlet and branch distribution are discussed in the literature review (Section 2.2.1, Historical changes affecting distribution of mainstream bank services, 1980s-2000s). Future research using alternative spatial models that have been developed to measure and account for spatial autocorrelation may authenticate or build upon the findings of this study.

A third issue relates to the generalizability of the research results. The study uses full population data drawn from Winnipeg and selected rural Manitoba study sites. Although the conclusions from the Manitoba study may be considered unique to the market, basic location determinants across other provinces are likely to share similarities if rooted in the corporate

the regression model cannot be deemed as having zero covariance with each other). Alternative spatial regression models have been developed to measure and account for spatial autocorrelation. Common measures include Moran's I, Geary's C, Ripley's K and Join Count analysis, designed to measure the strength of spatial autocorrelation and test the assumption of independence. These and other indices may be used to correct for the problem or to acknowledge and treat the dependencies as a source of information (Fotheringham, et al., 2000; Upton & Fingleton, 1985; Ward & Gleditsch, 2008).

strategy of larger, nation-wide firms. However, market characteristics of particular provinces may influence patterns observed, especially as different regulatory regimes are established and implemented. To increase the generalizability of the findings of this study, researchers may examine and test these relationships across other provinces to develop a composite picture of the site-location strategies of the payday loan industry in Canada.

5.6 FUTURE RESEARCH AND POLICY IMPLICATIONS

At the completion of this study, several related avenues of research can be outlined including policy implications. This research looked at only one Canadian market. An important precursor to more comprehensive policy recommendations is the examination of location patterns across other Canadian urban centers and rural markets.

1. Further Local Research: The Manitoba Market

The impact of Manitoba's tougher regulatory stance on the payday loan industry's presence and concentration can be studied in relation to its history as presented here for temporal context and compared with the experience of other provinces with different regulatory policies. There is an opportunity to employ a longitudinal, quasi-experimental design whereby Manitoba regulatory policy represents the treatment with payday loan outlet locations in Manitoba as the observation, over time. The location observations over time in the other untreated, or control, provinces would serve as the comparison.

A comprehensive location analysis of all rural centres within the province of Manitoba including surrounding towns and villages would provide fuller insight to the current state of financial service provision to these areas. Does economic erosion of nearby rural communities lead to the increased appearance of payday lenders in larger, rural centres? More research investigating rural demographics and regional traffic patterns including spatial analysis of mainstream banks, retailers and employers in each municipality may provide further insights.

Further location analysis of the Manitoba market would include a neighbourhood by neighbourhood study of Winnipeg to determine whether payday lenders are concentrated in relatively lower-income suburbs with less economic potential compared to banks and credit unions. The aim of such analysis would be to determine whether there is a lead/lag relationship between the appearance of payday lenders in a given neighbourhood and the subsequent disappearance of mainstream banks in close proximity. Do payday lenders target suburban market areas where banks are predicted to rationalize their network? Might this be another reason for their co-location habits?

2. Further Domestic Research: Other Canadian Provinces

A replication or adaptation of the location analysis carried out in Manitoba across other Canadian provinces would provide a basis for comparison that would offer further insights into how the industry is evolving relative to other economies and regulatory practices. In doing so, it would be useful to then carry out a comparison between patterns in growth markets, versus flat to declining, economies. The issue is raised because the number of payday lenders in Manitoba is one of the highest in the country on a per capita basis. The fact that National Cash Advance, the

largest payday lender by number of outlets in the United States, has chosen Manitoba as one of only two provinces to debut its network is a curious development. Add to that, Canadian banks have publicly announced their intention to renew their commitment to branch networks with an emphasis on growth markets in Alberta and British Columbia (Mezzetta, 2006) and it opens up the possibility that provinces like Manitoba may expect fewer mainstream bank branches and more non-bank substitutes to enter the market in the future. Could it be that what has transpired in the financial services industry in Winnipeg's inner-city over the last three decades is a microcosm for what lies ahead for the province and weaker economies across the country?

3. Further Examination of the Incremental Benefit to Payday Lenders of Locating Next to Mainstream Banks

Research prepared to investigate the degree to which payday lenders benefit by locating near mainstream banks could include a comparison of foot traffic generated by financial service clusters versus payday lender outlets located in isolation of bank and credit union branches. Are patrons of nearby banks more likely to be attracted or directed to the service of payday lenders if found to be ineligible for conventional credit? Or do neighbouring banks and payday lenders draw from separate and distinct market segments? To what degree do mainstream banks and payday lenders located next to one another share customers? Determining the degree to which low-income residents living in the suburbs patronize local payday loan establishments cannot be determined on the basis of spatial analysis alone since it requires an understanding of the customer base and mix of business transacted at each location. Research or policy directed at

obtaining information regarding portfolio mix at the outlet level would be useful in terms of providing further insights.

4. Further Research Dedicated to Studying the Market Strategy of US-based, Multinational Payday Lenders Located in Canada.

Research intended to follow more closely the location and business strategies of the larger and more dominant players will help prepare policymakers and regulators to track and anticipate moves within the domestic market and potential implications for Canadian consumers.

5. Implications for Public Policy Related to the Issue of Access to Basic Banking

Currently regulations require federally regulated banks to open a bank account to anyone with adequate identification and to cash certain federal government cheques for no fee. These regulations do not deal with bank branch locations except that The Financial Consumer Agency of Canada does require notifying residents of a branch closure and offering to hold a public meeting, if residents request it. These regulations require certain processes to be followed but they cannot stop the bank from closing its branch, and they cannot require banks to open new branches in neighbourhoods that are underrepresented by mainstream financial institutions. The results from this study demonstrate that some vulnerable neighbourhoods in Winnipeg are not well represented by mainstream financial institutions. The Assiniboine Credit Union provides an example of one institution that is returning to the inner-city. Public policy that identifies vulnerable neighbourhoods, and allows some measure of understanding of the availability and mix of financial services accessible to its residents can help create awareness, encourage and

incent a coordinated effort by stakeholders. A precedent exists in terms of the approach taken to rural markets to ensure the adequacy of service.

6. Opportunities for Research Focused on the Financial Needs of Low-Income Canadian Consumers

Research focusing on ways that poor communities have found to fill financial service voids concludes that poor people require the same types of financial services as non-poor people, if only on a smaller scale. According to this perspective, financial service innovations have not kept pace with changing conceptions of the poor; now better understood to represent a diverse group of vulnerable households with a range of short-, medium- and long-term needs for savings, credit and insurance. Additionally, physical location, social and economic position, policy restrictions involving cheque-holds, personal identification requirements, and product design all serve as obstacles that limit access to full service banks. Financial exclusion studies of this type call for a deeper understanding of how low-income consumers manage household budgets, fundamental to developing products and services that will better attract their interest, support their efforts and ease their hardship. The potential role of technology and basic access to web-based financial services tailored to this market is worthy of further exploration. Is there a role to play for payday lenders beginning to show an interest in offering deposit services to their client base? Are they especially suited to design and deliver the types of products and services necessary to more fully attend to the needs of this market? A qualitative study involving surveys, interviews and focus groups with patrons may reveal added insights.

5.7 CONCLUDING REMARKS

The findings of future research recommended here may serve to inform ongoing domestic policy discussions about the status of the payday loan industry. This study attempts to deal with the question of its origin and endurance—surprising in a country with Canada’s advantages, including a strong system of national, federally chartered banks and provincially regulated credit unions. In so doing, the discussion has focused on the experience of one region faced with the challenge of a rapidly expanding payday lending sector that has emerged to meet the needs of a growing population of financially-stressed consumers. Results of this study provide preliminary evidence that the payday loan industry is changing the landscape of financial services in ways that may not have been predicted a few short years ago. Whether Manitoba is an anomaly or part of a larger trend found across the country remains to be seen.

References

- Advance America Cash Advance Centers, (2009, November) *Advance America 10-K Report*. Retrieved from:
<http://investors.advanceamerica.net/secfiling.cfm?filingID=1104659-09-63753>
- Aitken, R. (2006). Capital at its fringes. *New Political Economy*, 11(4), 479-498.
- Anderson, C., & Nevitte, N. (2006). Teach your children well: Values of thrift and saving. *Journal of Economic Psychology*, 27, 247-261.
- Apgar, W. C., Jr., & Herbert, C. E. (2004). *Subprime lending and alternative financial service providers: A literature review and empirical analysis*. Cambridge, MA: ABT Associates.
- Avery, R., Bostic, R., Calem, P., & Canner, G. (1997). Changes in the distribution of banking offices. *Federal Reserve Bulletin*, 83(9), 707-725.
- Barr, M. S. (2004). *Banking the Poor: Policies to Bring Low-Income Americans into the Financial Mainstream*. Washington, DC: Brookings Institution
- Batchgeocode. (2010). *Batchgeo*. [On-line computer software]. Retrieved from:
<http://www.batchgeocode.com>
- Ben-Ishai, S. (2008). Regulating payday lenders in Canada: Drawing on American lessons. CLPE Research Paper, 4(3), Toronto: Osgoode Hall Law School, York University. Retrieved from: <http://ssrn.com/abstractid=1128147>
- Beach, C., Finnie, R., & Gray, D. (2003). Earnings variability and earnings instability of women and men in Canada: How do the 1990s compare to the 1980s? *Canadian Public Policy*, XXIX, S41-S63.
- Bouman, F. (1995) Rotating and accumulating savings and credit associations: A development perspective. *World Development*, 3(23), 371-395.
- Bowles, P. (2000). Assessing the impact of proposed bank mergers on rural communities:

- A case study of British Columbia. *Social Indicators Research*, 51(1) 17-40.
- Bowles, P., Ajit, D., Dempsey, & Shaw, T. (2011). Urban Aboriginal use of fringe financial institutions: Survey evidence from Prince George, British Columbia. *The Journal of Socio-Economics*, 40, 895-902.
- Braucher, J. (2006). Theories of overindebtedness: Interaction of structure and culture. *Theoretical Inquiries in Law*, 7(2), 323-346.
- Brennan, M., McGregor, B. Buckland, J. (2011). The changing structure of inner-city retail banking: Examining bank branch and payday loan outlet locations. *Canadian Journal of Urban Research* 20(1), 1-32.
- Buckland, J. (2012). *Hard choices: Financial exclusion, fringe banks and urban poverty in Canada*. Toronto: University of Toronto Press
- Buckland, J., Carter, T., Simpson, W., Friesen, A., & Osborne, J. (2007). *Serving or Exploiting People Facing a Short-Term Credit Crunch? A Study of Consumer Aspects of Payday Lending in Manitoba*. Report for the November 2007 Public Utilities Board Hearing to Cap Payday Loan Fees, Winnipeg, MB.
- Buckland, J. & Dong, Xiao-Yuan. (2008). Banking on the margin in Canada. *Economic Development Quarterly*, 22(3), 252-263.
- Buckland, J., Hamilton, B., & Reimer, B. (2006). Fringe financial services, inner-city banking & community-based solutions. *Canadian Journal of Urban Research* 15(1), 109-128.
- Buckland, J. & Martin, T. (2005). Two-tier banking: The rise of fringe banks in Winnipeg's inner city. *Canadian Journal of Urban Research*, 14(1), 158-181.
- Buckland, J, Martin, T., Barbour, N., Curran, A., McDonald, R., & Reimer, B. (2003). The rise of fringe financial services in Winnipeg's north end: Client experiences, firm legitimacy and community-based alternatives. Winnipeg: Winnipeg Inner-City Research Alliance.
- Burkey, M. & Simkins, S. (2004). Factors affecting the location of payday lending and

- traditional banking services in North Carolina. *Review of Regional Studies* 43(2), 191-205.
- CBC. (2000, November 10). BMO sells 13 branches to B.C. credit unions. Retrieved from:
<http://www.cbc.ca/news/business/story/2000/08/11/bmo000811.html>
- Canada Gazette. (2002). Public accountability statements (banks, insurance companies, trust and loan companies) regulations. *Part 11, 136(8)*, 810-813.
- Canadian Bankers Association (2005). *The consumer and the financial services sector: Study by the Standing Senate Committee on Banking, Trade and Commerce*. Retrieved from:
http://www.cba.ca/en/content/reports/050601_SenateSubmission_mckj.pdf
- Canadian Bankers Association (1978-1982) *Routing numbers of deposit-taking institutions in Canada other than chartered banks*. Don Mills, Ontario: Plow & Watts Printing Canada Limited,
- Canadian Payday Loan Association, (2005, June 22). Payday loan industry association unveils a stronger code of best business practices to protect consumers.
 Retrieved from: http://www.cpla-acps.ca/pr_2005_04.php
- Canadian Payments Association (2010). *Financial institutions branch directory*. Ottawa: CPA.
 Retrieved from: <http://www.cdnpay.ca>
- Canadian Payments Association (1983-2008). *Directory of financial institutions: Volumes 1, 2, 3* Toronto, Ontario: Bowne.
- Canadian Payroll Association (2010, September 13). Canadian workers living from paycheque to paycheque. Retrieved from: <http://www.payroll.ca/Content/Navigation Menu/MediaRoom/NewsAnnouncements/paycheque1.htm>
- Carter, T. (2009). Planning for newcomers in Winnipeg's inner city. In *Welcoming communities: Planning for diverse populations*. Ottawa: Canadian Institute of Planners.
- Cash, M. (2009, December 23). Merger good for members: new CEO, Interlake credit unions aim to pass on savings. *Winnipeg Free Press*.

- Caskey, J. P. (1994). *Fringe banking: Check-cashing outlets, pawnshops, and the poor*. New York: Russell Sage Foundation.
- Caskey, J. P. (2002). *The economics of payday lending*. Madison, WI: Filene Research Institute.
- Cash Store Financial (2011) *Annual Report, 2010*. Edmonton, Ab: Cash Store Financial.
- Chan, M. & Mountain, D. (1986). Measuring returns to scale and technological change in cooperative banks: A provincial analysis of Canada's credit unions and caisses populaires. *Empirical Economy*, (11)4, 207-222.
- City of Brandon. (2010). *Brandon economic development*. Retrieved from: www.Brandon.com
- City of Winnipeg. (n.d.) 2001 Census: Neighbourhood profiles. Retrieved from: <http://www.winnipeg.ca/census/2001>
- City of Winnipeg (n.d.) 2006 Census: Retrieved from: <http://www.winnipeg.ca/census/2006>
- Coltman, T. (2007). Can superior CRM capabilities improve performance in banking? *Journal of Financial Services Marketing* (12)2,102-114.
- Communication Canada (2002). Registration SOR/DORS/2002-132. *Canada Gazette*, Part II, Vol. 136(8):810-813,10 April 2002, Retrieved August 25, 2010 from: <http://gazette.gc.ca/archives/p2/2002/2002-04-10/pdf/g2-13608.pdf>
- Cover, J., Fowler, C., Kleit, R., & Russo, A. (2009). The geography of fringe banking. Retrieved from http://cyp.evans.washington.edu/wp-content/uploads/2009/09cover_fowler_kleit_russo_2009.pdf
- Cover., Fuhrman, A., & Kleit. (2011). The spatial organization of fringe banking services. *Journal of Urban Affairs*, 33(3), 317-345.
- Credit Union Central of Canada (2008). *Largest 100 credit unions/caisses populaires*. System Results. Retrieved from http://www.cucentral/top100_4thQ_15April09
- Damar, H. E. (2009). Why do payday lenders enter local markets? Evidence from Oregon.

- Review of Industrial Organization*, 34(2), 173-191.
- Danna, A. & Gandy, O. (2002). All that glitters is not gold: Digging beneath the surface of data mining. *Journal of Business Ethics* 40(4), 373-386.
- Department of Defense World Geodetic System (1984). *NIMA* (TR8350.2) Retrieved from <http://earth-info.nga.mil/GandG/publications/tr8350.2/tr8350.html>
- Department of Finance, Canada. (2000, June 13). Summary of key legislative measures and statements of government policy. News release 00-047. Retrieved from: http://www.fin.gc.ca/news00/00-047_2e.html
- Department of Finance, Canada. . (2002). Canada's banks. Accessed at www.fin.gc.ca
- Department of Justice, Canada. (1985). Revised Statutes of Canada (1985), c.C-46, s.347 (1). Retrieved from <http://laws.justic.gc.ca/eng/acts/C-46/page-160.html>
- Devlin, J. (2005). A detailed study of financial exclusion in the UK. *Journal of Consumer Policy*, 28, 75-108.
- Dollar Financial Corp (2004). Filing with the Securities and Exchange Commission on October 12, 2004. Retrieved from: http://ipo.nasdaq.com/ViewFiling_frames.asp?filename=0001047469%2D04%2D030931%2Etxt&filepath=%5C2004%5C10%5C12%5C
- Dymski, G. & Veitch, J. (1996). Financial transformation and the metropolis: Booms, busts and banking in Los Angeles. *Environment and Planning*, 28(7), 1233-1260.
- Ekos Research Associates. (2001). *Canadians' knowledge and awareness of financial products, services and institutions-FCAC survey: Final report*. Ottawa: Financial Consumer Agency of Canada.
- Elliehausen, G. (2006). *Consumers' use of high-priced credit products: Do they know what they they are doing?* Indianapolis, IN.: Networks Financial Institute at the Indiana State University
- Elliehausen, G. & Lawrence, E. (2001). *Payday advance credit in America: An analysis of*

- customer demand*. Washington, DC: Credit Research Center, Georgetown University.
- EnviroNics Research Group. (2005). *Understanding consumers of Canada's payday loans industry*. Toronto: Canadian Association of Community Financial Service Providers.
- Ernst and Young. (2004). *The cost of providing payday loans: A report prepared for the Canadian Association of Community Financial Service Providers*. Toronto: Ernst and Young.
- Fellowes, M. & Mabanta, M. (2008). *Banking on wealth: America's new retail banking infrastructure and its potential for building wealth*. Washington, DC: Brookings Institution.
- Finance Canada (1999). *Reforming Canada's financial services sector: A framework for the future*. (Financial Services White Paper). Retrieved from: <http://www.parl.gc.ca/parlinfo/Compilations/FederalGovernment/PaperDetail.aspx?Paper=c6a4db8e-e464-430b-bbfe-ca77532e9ccb&Document=e907146c-fa09-4f67-a467-237df0c92442&Language=E>
- Flannery, M. & Somolyk, K. (2005). *Payday lending: Do the costs justify the price?* (Report No. 2005-09) Arlington, VA.: Center for Financial Research, Federal Deposit Insurance Corporation.
- Fotheringham, A., Brunsdon, C., & Charlton, M. (2000). *Quantitative geography: Perspectives on spatial data analysis*. London: Sage Publications Ltd.
- Graves, S.M. (2003). Landscapes of predation, landscapes of neglect: A location analysis of payday lenders and banks. *The Professional Geographer*, 55(3), 303-317.
- Gujarati, D. (2003). *Basic Econometrics* (4th ed.). New York: McGraw-Hill.
- Her Majesty's Treasury. (2004). *Promoting financial inclusion*. London: Author.
- Ipsos Reid Corporation. (2005). *Public experience with financial services and awareness of FCAC*. Ottawa: Financial Consumer Agency of Canada.
- Johnson, S. & Rogaly, B. (1999). *Microfinance and poverty reduction*. London: Oxfam Publications.
- Jones, K. (2000). Dynamics of the Canadian retail environment, in T. Bunting & P. Filion (Eds.),

- Canadian cities in transition: The twenty-first century*, 2nd edn. Oxford: Oxford University Press.
- Jones, K., Bermingham, P., & Erguden, T. (2005). *Payday lenders: A location analysis*. Toronto: Centre for the Study of Commercial Activity, Ryerson University.
- Jones, K., Gomez-Insausti, R., & Bermingham, P. (2004). *Banks in small communities in Canada: 1998-2004*. Toronto: Ryerson University.
- Retrieved from http://www.cba.ca/en/content/reports/050601_SenateSubmission_mckj.pdf
- Kitching, A. & Starky, S. (2006). *Payday loan companies in Canada: Determining the public interest*. (Report No. PRB 05-81E). Ottawa: Library of Parliament.
- Leyshon, A. & Pollard, J. (2000). Geographies of industrial convergence: The case of retail banking. *Royal Geographic Society*, 25(2), 203-220.
- Leyshon, A. & Thrift, N. (1995). Geographies of financial exclusion: Financial abandonment in Britain and the United States. *Transactions of the Institute of British Geographers*, 20, 312-341.
- Leyshon, A., Signoretta, P., & French, S. (2008). Financial exclusion and the geography of bank and building society branch closure in Britain. *Transactions of the Institute of British Geographers*, 33, 447-465.
- Lockhart, L. (2005). The retail evolution in banking. *Retail Banker International*, 543, 12-13.
- Lott, S. & Grant, M. (2002). *Fringe lending and "alternative" banking: The consumer experience*. Ottawa: Public Interest Advocacy Centre.
- MacKinnon, S. (2009). *State of the inner-city 2009*. Retrieved from:
<http://www.policyalternatives.ca>
- Manitoba Bureau of Statistics. (2011). Manitoba: *The past, the present and the future*. Retrieved from: <https://www.direct.gov.mb.ca>
- Manitoba Family Services and Consumer Affairs. (n.d.) *Payday loan information for businesses*

- and consumers*. Retrieved from: http://www.gov.mb.ca/fs/cca/cpo/faq_payday_c.html
- Manitoba Public Utilities Board Transcript, Volume IV (2006). *To determine maximum fees for payday lenders*. Retrieved from <http://www.pub.gov.mb.ca/misctrans.html>
- Manitoba Public Utilities Board. (n.d.) *To determine allowable fees for cashing government cheques*. (Volume IV). Winnipeg, MB: Public Utilities Board.
- Mann, R. J. & Hawkins, J. (2007). Just until payday. *UCLA Law Review*, 54(4), 855-912.
- Mezzetta, R. (2006, December). Banks renew commitment to branch networks. *Investment Executive*. Retrieved from: <http://www.investmentexecutive.com>
- Miles, J. & Shevlin, M. (2001). *Applying Regression and Correlation: a Guide for Students and Researchers*. USA: Sage Publications Ltd.
- Mitchell, A. (2005). *The ESRI Guide to GIS Analysis, Volume 2: Spatial Measurement and Statistics*. USA: IPG.
- Morgan, D. & Strain, M. (2007). *Payday holiday: How households fare after payday credit Bans* (Report No. 39). Federal Reserve Bank of New York.
- Morissette, R., & Ostrovsky, Y. (2006, October). Earnings instability. *Perspectives on Labour & Income* (Cat. no. 75-001-XIE) 7(10), 5-16.
- Mullainathan, S. & Thaler, R. (2001). Behavioral economics. In N. Smelsner and P. Baltes (Eds.), *International Encyclopedia of the Social and Behavioral Sciences*. Amsterdam: Elsevier.
- Ostrom, E. (1990). Relations on the commons. In *Governing the commons: The evolution of institutions for collective action* (Chapter 1). Cambridge: Cambridge University Press.
- Parliament of Canada (2007, March 17). *Proceedings of the Standing Senate Committee on Banking, Trade and Commerce. Issue 16*. Ottawa: Canada.
- Prager, R.A. (2009). *Determinants of the locations of payday lenders, pawnshops and check-cashing outlets*. Washington, DC: Federal Reserve Board.

- Pyper, W. (2007, April). Payday loans. *Perspectives on Labour and Income*. (Cat. No. 75-001-XIE), 8(4), 5-13.
- Ramsay, I. (2000). *Access to credit in alternative consumer credit market*. Industry Canada Office of Consumer Affairs and British Columbia Ministry of the Attorney General.
- Ramsay, I. (2001). The alternative consumer credit market and financial sector: Regulatory issues and approaches. *Canadian Business Law Journal* 38(3), 386-93.
- Robinson, C. (2006). *Regulation of payday lending in Canada: A report to ACORN*. Toronto: ACORN Canada
- Rogaly, B., Fisher, T., & Mayo, E. (1999). *Poverty, social exclusion and microfinance in Britain*. London: Oxfam.
- Sanders, C. (2011, October 20). New planned North End bank draws cheers. *Winnipeg Free Press*, B2.
- Sauvé, R. (2011, February). *The current state of Canadian family finances: 2010 Report*. The Vanier Institute of the Family, Retrieved from:
<http://www.vifamily.ca/library/cft/state10.html>
- Schull, J. & Gibson, J. (1982). *The Scotiabank story: A history of the Bank of Nova Scotia 1832-1982*. Toronto: MacMillan of Canada.
- Shefrin, H. & Thaler, R. (1981). The behavioral life-cycle hypothesis. *Economic Inquiry* 26(4), 609-643.
- Sherraden, M. & Barr, M. (2005). Institutions and inclusion in savings policy. In N. Retsinas & E. Belsky (Eds.), *Creating Wealth in Low-Income Communities*, (pp.206-36). Washington, DC: Brookings Institution.
- Simpson, W. & Buckland, J. (2009). Examining evidence of financial and credit exclusion in Canada from 1999-2005. *Journal of Socioeconomics*, 38(6), 966-976.
- Skiba, P. & Tobacman, J. (2009). *Do payday loans cause bankruptcy?* Vanderbilt Law and

- Economics Research Paper No. 11-13. Retrieved from SSRN:
<http://ssrn.com/abstract=1266215>.
- Smith, Adam. (1776). *An inquiry into the nature and causes of the wealth of nations*. UK: W. Strahn and T. Cadell, London.
- Smith, T., Smith, M., & Wackes, J. (2008). Alternative financial service providers and the spatial void hypothesis. *Regional Science and Urban Economics* 38, 205-227.
- Squires, G. & O'Connor, S. (2001). *Color and money: Politics and prospects for community reinvestment in urban America*. Albany: State University of New York.
- Statistics Canada, Income Statistics Division (1999). *1999 Survey of Financial Security*, Ottawa: Canada.
- Statistics Canada. (2001). Census tract profiles. 2001 census. Retrieved from:
<http://www12/statcan.gc.ca/census-recensement/2001/de-pd/prof92-597/index.cfm?Lang=E>
- Statistics Canada (2005a). The assets and debts of Canadians: A summary of the results of the SFS. Statistics Canada catalogue no. 13-595-XIE. Ottawa. Retrieved from:
<http://www.statcan.ca/cgi-bin/downpub/research.or>
- Statistics Canada, Income Statistics Division (2005b). *2005 Survey of Financial Security*, Ottawa: Canada.
- Statistics Canada (2006a). Census tract (CT) profiles, 2006 census. Retrieved from: <http://www12.statcan.gc.ca/census-recensement/2006/de-pd/prof/92-597/index.cfm?Lang=E>
- Statistics Canada (2006b). Census dictionary. Retrieved from:
<http://www.census2006.ca/english/census06/reference/dictionary/fam004.cfm>
- Statistics Canada (2008). Distribution of the population, by type of neighbourhood, by type of neighbourhood, 2001. Retrieved from <http://www/statcan.gc.ca/pub/>

11-008-x/2008001/t/10459/4097957-eng.htm

- Stegman, M. (2007). Payday lending. *Journal of Economic Perspectives*, 21(1). 169-190.
- Stegman, M. & Faris, R. (2003). Payday lending: A business model that encourages chronic borrowing. *Economic Development Quarterly*. 17 (1), 8-32.
- Tal, B. (2009). *Household credit analysis*. CIBC. Retrieved from:
http://research.cibc.wm.com/economic_public/document/hc9-091006.pdf-windowsIn
- Task Force Report on the Future of the Canadian Financial Services Sector (1998). *Change, challenge, opportunity* (Mackay Report). Ottawa: Department of Finance, Canada.
- Temkin, K. & Sawyer, N. (2004). *Analysis of alternative financial service providers*. Washington, DC: Fannie May Foundation.
- Upton, G. & Fingleton, D. (1985). *Spatial data analysis by example: Categorical and directional data, Volume 2*. Great Britain: John Wiley & Sons Ltd.
- Waldron, M. (2003). What to do with Section 347? *The Canadian Business Law Journal*, 38(3), 367.
- Ward, M. & Gleditsch, K. (2008). *Spatial regression models*. USA: Sage Publications, Inc.
- Watson, J. (2003). The relationship of materialism to spending tendencies, savings and debt. *Journal of Economic Psychology*, 24(6), 723-739.
- Wheatley, W. (2010). Economic and regional determinants of the location of payday lenders and banking institutions in Mississippi: Reconsidering the role of race and other factors in firm location. *The Review of Regional Studies*, 40(1), 53-64.
- Whitelaw, B. (2005). \$280 till payday: the short-term loan industry says it provides a service the (average) Canadian needs, wants and appreciates. *Vancouver Sun*. June 8, 2005. Retrieved from http://www.cpla-acps.ca/english/clippings_2005_1.php
- Yalnizyan, A. (2007, March). *The rich and the rest of us: The changing face of Canada's growing gap*. Retrieved from www.GrowingGap.ca/research

Table 1

Number of Bank, Credit Union, and Payday Lender Branches/Outlets in Winnipeg (1985, 1995, 2009)

| Location | Branches/Outlets | | | | | |
|-----------------------|------------------|-------|------|-------|------|-------|
| | 1985 | | 1995 | | 2009 | |
| | No. | % | No. | % | No. | % |
| Bank Total | 184 | 100.0 | 167 | 100.0 | 119 | 100.0 |
| Suburban ^a | 146 | 79.4 | 137 | 82.1 | 106 | 89.1 |
| Inner-city | 38 | 20.6 | 30 | 17.9 | 13 | 10.9 |
| Credit union Total | 39 | 100.0 | 56 | 100.0 | 68 | 100.0 |
| Suburban | 28 | 71.8 | 44 | 78.6 | 59 | 86.9 |
| Inner-city | 11 | 28.2 | 12 | 21.4 | 9 | 13.1 |
| Payday lender Total | 0 | - | 3 | 100.0 | 62 | 100.0 |
| Suburban | 0 | - | 0 | - | 41 | 66.1 |
| Inner-city | 0 | - | 3 | 100.0 | 21 | 33.9 |

^aIncludes downtown core business district.

Table 2

Number of Bank, Credit Union, and Payday Lender Branches by Rural Manitoba Location (1985, 1995, 2009)

| Location | Branches/Outlets | | |
|---------------------|------------------|------|------|
| | 1985 | 1995 | 2009 |
| Bank total | 28 | 27 | 28 |
| Brandon | 11 | 11 | 11 |
| Dauphin | 6 | 6 | 6 |
| Portage | 5 | 4 | 5 |
| Thompson | 6 | 6 | 6 |
| Credit union total | 7 | 4 | 14 |
| Brandon | 5 | 3 | 8 |
| Dauphin | 1 | 0 | 2 |
| Portage | 1 | 1 | 3 |
| Thompson | 0 | 0 | 1 |
| Payday lender total | 0 | 0 | 11 |
| Brandon | 0 | 0 | 4 |
| Dauphin | 0 | 0 | 2 |
| Portage | 0 | 0 | 3 |
| Thompson | 0 | 0 | 2 |

Table 3

Banks, Credit Unions and Payday Lenders in Winnipeg Dissemination Areas with Above and Below Average Household Income (2005): Chi-square Test

| Category | Household Income | O ^a | E ^b | (O-E) | (O-E) ² | $\frac{(O-E)^2}{E}$ |
|---------------|----------------------|----------------|----------------|-------|--------------------|---------------------|
| Bank | Non-residential | 21 | 18 | 3 | 9 | .50 |
| | Below avg < \$63,123 | 68 | 79.2 | -11.2 | 125.44 | 1.5838 |
| | Above avg > \$63,123 | 33 | 24.8 | 8.2 | 67.24 | 2.7111 |
| Credit union | Non-residential | 10 | 9.9 | .1 | .01 | .001 |
| | Below avg < \$63,123 | 45 | 43.5 | 1.5 | 2.25 | .0517 |
| | Above avg > \$63,123 | 12 | 13.6 | -1.6 | 2.56 | .1882 |
| Payday lender | Non-residential | 3 | 6.2 | -3.2 | 10.24 | 1.6516 |
| | Below avg < \$63,123 | 37 | 27.3 | 9.7 | 94.09 | 3.4465 |
| | Above avg > \$63,123 | 2 | 8.5 | -6.5 | 42.25 | 4.9705 |

Note: $X^2 = 15.1$

^a where O is observed frequency

^b where E is expected frequency

Table 4

Payday Lender Outlets and Distance from Bank, Credit Union Branches: Winnipeg (2000, 2005, 2009)

| Distance | Payday Lender Outlets | | | | | |
|-------------------------------------|-----------------------|-------|------|-------|------|-------|
| | 2000 | | 2005 | | 2009 | |
| | No. | % | No. | % | No. | % |
| Payday lender Total | 7 | 100.0 | 42 | 100.0 | 62 | 100.0 |
| Within 1 km of a bank ^a | 6 | 85.7 | 35 | 83.3 | 51 | 82.3 |
| Within 250 m of a bank | 3 | 42.9 | 21 | 50.0 | 27 | 43.5 |
| Farther than 1 km of a bank | 1 | 14.3 | 7 | 16.7 | 11 | 17.7 |
| Within 1 km of a credit union | 6 | 85.7 | 33 | 78.6 | 49 | 79.0 |
| Within 250 m of a credit union | 1 | 14.3 | 22 | 52.4 | 20 | 32.3 |
| Farther than 1 km of a credit union | 1 | 14.3 | 9 | 21.4 | 13 | 21.0 |

^aAnd therefore, within 250 m.

Table 5

Average Characteristics of Census Tracts by Presence of Payday Lender Outlets or Bank, Credit Union Branches: Winnipeg (2006)

| Variables | All Tracts | No Pdlrs, Bnks, Cus ^a | All 3 Types | Pdlrs Only | Bnks Only | Cus Only | Pdlrs and Bnks | Pdlrs and Cus | Bnks and Cus |
|---------------------|------------|----------------------------------|-------------|------------|-----------|----------|----------------|---------------|--------------|
| No. of tracts | 166.0 | 79.0 | 6.0 | 16.0 | 33.0 | 7.0 | 10.0 | 1.0 | 14.0 |
| % of all tracts | 100.0 | 48.0 | 4.0 | 9.0 | 20.0 | 4.0 | 6.0 | 1.0 | 8.0 |
| Density (#) | 2622.00 | 2240.00 | 1490.00 | 3502.00 | 2643.00 | 3285.00 | 2239.00 | 3793.00 | 2840.00 |
| Age 15-39 (%) | 34.1 | 33.3 | 37.1 | 35.0 | 33.3 | 35.1 | 30.7 | 46.9 | 34.5 |
| Aboriginal (%) | 10.8 | 10.1 | 34.4 | 15.0 | 8.0 | 22.4 | 9.5 | 7.8 | 12.4 |
| Vis. minority (%) | 14.1 | 12.2 | 5.1 | 14.0 | 14.1 | 14.6 | 14.2 | 8.9 | 16.8 |
| No diploma (%) | 19.6 | 19.2 | 17.0 | 22.0 | 17.3 | 28.2 | 17.7 | 17.1 | 21.0 |
| Unemployment(%) | 5.5 | 4.8 | 3.9 | 6.3 | 4.8 | 7.1 | 3.8 | 4.6 | 6.6 |
| Low income (%) | 11.8 | 9.2 | 7.1 | 16.7 | 8.5 | 26.7 | 7.9 | 14.0 | 17.4 |
| Avg family size(#) | 2.9 | 3.0 | 2.9 | 2.9 | 2.9 | 2.8 | 2.9 | 2.7 | 2.8 |
| Avg hhld inc (\$) | 64073.00 | 70731.00 | 68253.00 | 51431.00 | 68648.00 | 43834.00 | 60816.00 | 45973.00 | 54380.00 |
| Median hhld inc(\$) | 54474.00 | 61159.00 | 59643.00 | 44406.00 | 56740.00 | 36931.00 | 56157.00 | 39250.00 | 45024.00 |
| Lone parent (%) | 5.2 | 4.8 | 4.2 | 6.9 | 4.7 | 7.1 | 5.1 | 5.6 | 6.2 |

Note. Census data by census tract accessed from Statistics Canada (2006b).

^a Indicates payday lender outlets, bank branches, credit union branches, respectively.

Table 6

Average Characteristics of Census Tracts by Presence of Payday Lender Outlets or Bank, Credit Union Branches: Winnipeg (2001)

| Variables | All Tracts | No Pdlrs, Bnks , Cus ^a | All 3 Types | Pdlrs Only | Bnks Only | Cus Only | Pdlrs and Bnks | Pdlrs and Cus | Bnks and Cus |
|---------------------|------------|--------------------------------------|-------------|------------|-----------|----------|----------------|---------------|--------------|
| No. of tracts | 163.0 | 73.0 | 5.0 | 3.0 | 41.0 | 9.0 | 3.0 | 2.0 | 27.0 |
| % of all tracts | 100.0 | 45.0 | 3.0 | 2.0 | 25.0 | 6.0 | 2.0 | 1.0 | 17.0 |
| Density(#) | 2655.00 | 2188.00 | 1490.00 | 3395.00 | 2974.00 | 2967.00 | 5566.00 | 4339.00 | 2743.00 |
| Age 15-39(%) | 35.6 | 35.5 | 33.0 | 38.9 | 32.2 | 35.7 | 35.6 | 46.9 | 35.6 |
| Aboriginal(%) | 9.2 | 8.8 | 14.0 | 15.9 | 7.8 | 7.6 | 16.3 | 17.7 | 9.3 |
| Vis .minority(%) | 11.7 | 9.9 | 21.5 | 9.4 | 11.8 | 11.6 | 16.9 | 10.0 | 12.6 |
| No diploma(%) | 24.7 | 24.0 | 25.0 | 30.1 | 22.5 | 27.8 | 26.9 | 29.6 | 22.9 |
| Unemployment(%) | 6.0 | 5.7 | 8.5 | 7.4 | 5.0 | 6.7 | 6.0 | 7.3 | 5.7 |
| Low income(%) | 16.3 | 13.7 | 26.5 | 28.3 | 15.4 | 14.7 | 30.0 | 24.6 | 19.3 |
| Avg family size(#) | 2.9 | 3.0 | 3.0 | 2.8 | 2.9 | 2.9 | 2.7 | 2.7 | 2.7 |
| Avg hhld inc(\$) | 54581.00 | 59971.00 | 47089.00 | 40704.00 | 54954.00 | 48547.00 | 38726.00 | 37604.00 | 44679.00 |
| Median hhld inc(\$) | 47234.00 | 52897.00 | 40711.00 | 34204.00 | 46626.00 | 42202.00 | 32571.00 | 32472.00 | 38825.00 |
| Lone parent (%) | 5.0 | 4.6 | 6.5 | 7.3 | 5.1 | 5.1 | 6.8 | 8.4 | 5.2 |

Note. Census data by census tract accessed from Statistics Canada (2001)

.^a Indicates payday lender outlets, bank branches, credit union branches, respectively

Table 7

Modeling Results Predicting Number of Payday Loan Outlets, Bank and Credit Union Branches per Census Tract per 100 Population : Estimation Equation(1)

| Independent Variables | Dependent Variables | | | | | | | | |
|-----------------------|--|--------------------|--------------------|----------------------------------|----------------------|----------------------|--|--------------------|---------------------|
| | Payday Loan Outlets Per Hundred Capita | | | Bank Branches Per Hundred Capita | | | Credit Union Branches Per Hundred Capita | | |
| | 2001 | 2006 | Pooled | 2001 | 2006 | Pooled | 2001 | 2006 | Pooled |
| Constant | -0.001 (-0.28) | 0.006 (0.34) | 0.003 (0.48) | -0.002 (0.07) | 0.000 (0.01) | 0.032*** (2.91) | 0.016 (1.11) | 0.012 (0.86) | 0.014 (1.45) |
| Pdl outlets | | | | 2.460*** (3.3) | 0.570*** (3.13) | 0.009 (0.14) | 1.604*** (4.15) | 0.219*** (3.33) | -0.086 (-1.14) |
| Bnk branches | 0.027*** (3.3) | 0.104*** (3.13) | 0.067*** (3.62) | | | | 0.250*** (6.68) | 0.141*** (5.27) | 0.313*** (11.53) |
| Cu branches | 0.062*** (4.15) | 0.305*** (3.33) | 0.067* (1.810) | 0.894*** (6.68) | 1.075*** (5.27) | 0.547*** (10.85) | | | |
| Density | 0.000 (1.54) | 7.650 (0.57) | 0.000 (1.19) | -0.000* (-1.89) | -0.000* (-1.81) | -0.00*** (-2.49) | -0.00** (-2.03) | -0.000 (-0.66) | 0.000 (-0.53) |
| Age 15-39 | -0.000** (-2.21) | 0.000 (1.12) | 0.000 (0.000) | 0.003*** (3.85) | 0.002* (1.68) | 0.004*** (8.12) | -0.00 (0.27) | -0.00 (-1.15) | -0.000 (-1.04) |
| Aboriginal | 0.000 (0.13) | -0.000 (-0.4) | 0.000 (0.89) | -0.003** (-2.09) | 0.002 (1.55) | 0.000** (2.19) | 0.000 (0.95) | -0.000 (-1.01) | 0.000 (0.10) |
| Vis. minority | -0.000 (-0.02) | -0.000 (-0.66) | 0.000 (0.17) | 0.000 (0.26) | 0.000 (0.93) | 0.000 (1.12) | 0.000 (0.5) | -0.000 (-0.13) | 0.000 (0.07) |
| No diploma | 0.000 (1.44) | 0.000 (0.47) | -0.000 (-0.60) | -0.004*** (-3.51) | -0.004*** (-3.02) | -0.000*** (-3.09) | 0.003*** (4.0) | 0.000** (2.05) | 0.002*** (5.12) |

(continued)

Table 7

Modeling Results Predicting Number of Payday Loan Outlets, Bank and Credit Union Branches per Census Tract per 100 Population : Estimation Equation(1)

| Independent Variables | Dependent Variables | | | | | | | | |
|-----------------------|--|---------------------|---------------------|----------------------------------|----------------------|----------------------|--|-------------------|---------------------|
| | Payday Loan Outlets Per Hundred Capita | | | Bank Branches Per Hundred Capita | | | Credit Union Branches Per Hundred Capita | | |
| | 2001 | 2006 | Pooled | 2001 | 2006 | Pooled | 2001 | 2006 | Pooled |
| Unemployment | -0.000 (-0.5) | 0.002*** (2.6) | 0.000*** (2.97) | 0.006* (1.78) | 0.000 (0.3) | 0.000 (0.62) | 0.001 (0.62) | 0.002** (1.96) | -0.000 (-.49) |
| Low income | 0.000** (2.16) | -0.000 (-0.76) | -0.000** (-2.03) | -0.002* (-1.72) | -.003*** (-3.2) | 0.000 (0.33) | 0.000 (1.0) | 0.000 (1.51) | 0.000*** (2.83) |
| Avg. family size | -0.002 (-0.85) | -0.024** (-2.02) | -0.008 (-1.34) | 0.066*** (2.45) | 0.119*** (4.52) | -.026*** (-2.71) | -.035*** (-2.47) | -0.014 (-.43) | -.314*** (-3.65) |
| Avg. hhld inc | 0.000 (-0.59) | -2.230 (-0.83) | 0.000 (-0.22) | 0.000 (0.15) | 0.000 (1.33) | -0.000** (-2.28) | 0.000 (1.21) | 0.000 (0.34) | 0.000 (1.46) |
| Median hhld inc | 0.000 (1.47) | 6.920* (1.65) | 0.000 (0.72) | -0.000** (-2.32) | -0.000*** (-5.5) | 0.000 (0.86) | 0.00 (0.01) | 0.000 (0.72) | 0.000 (0.91) |
| Lone parent | -0.000 (-0.33) | 0.003** (1.94) | 0.002** (2.14) | 0.000 (0.02) | -0.155*** (-4.45) | -0.005*** (-3.53) | -0.006*** (-2.43) | -0.000 (-0.11) | 0.000 (0.60) |
| No. of Obs | 169 | 169 | 338 | 169 | 169 | 338 | 169 | 169 | 338 |
| Adj R ² | 0.351 | 0.275 | 0.203 | 0.510 | 0.556 | 0.387 | 0.519 | 0.384 | 0.392 |

Note: T-statistics in parentheses

*p < .10. **p < .05. ***p < .01.

Table 8

Modeling Results Predicting Number of Payday Loan Outlets, Bank and Credit Union Branches per Census Tract per 100 Population: Final Results

| Independent Variable | Dependent Variables | | | | | | | | |
|----------------------|--|--------------------|---------------------|----------------------------------|--------------------|----------------------|--|---------------------|--------------------|
| | Payday Loan Outlets Per Hundred Capita | | | Bank Branches Per Hundred Capita | | | Credit Union Branches Per Hundred Capita | | |
| | 2001 | 2006 | Pooled | 2001 | 2006 | Pooled | 2001 | 2006 | Pooled |
| Constant | -0.001 (-1.38) | -0.003 (-0.96) | 0.007** (-2.39) | -0.0025 (-1.03) | 0.018 (0.53) | 0.029** (2.76) | 0.001 (.41) | -0.081** (-2.48) | 0.008 (1.02) |
| Pdl outlets | | | | 1.95** (2.60) | 0.531** (2.74) | - | 2.005*** (5.43) | 0.240*** (3.75) | - |
| Bnk branches | 0.015** (2.20) | 0.081*** (3.20) | 0.059*** (3.84) | | | | 0.250*** (7.49) | 0.107*** (5.20) | 0.296 (12.08) |
| Cu branches | 0.070*** (5.18) | 0.326*** (3.75) | 0.072** (2.13) | 1.01*** (8.03) | 1.224*** (5.69) | 0.525*** (11.64) | | | |
| Density | - | - | - | - | - | -0.00** (-2.24) | - | - | - |
| Age (15-39) | - | - | - | 0.003*** (4.55) | 0.003*** (5.18) | 0.003*** (8.32) | - | - | - |
| Aboriginal | - | - | - | - | 0.002** (2.52) | 0.000** (2.04) | - | - | - |
| Vis. minority | - | - | - | - | - | - | - | - | - |
| No diploma | - | - | - | -0.003*** (-3.57) | - | -0.001*** (-3.86) | - | - | 0.001*** (5.71) |
| Unemployment | - | 0.001** (2.24) | 0.001** (2.82) | - | - | - | - | 0.002*** (3.73) | - |
| Low income | 0.000*** (3.15) | - | -0.000** (-2.21) | - | -0.002** (-2.8) | - | - | - | 0.000*** (3.10) |

(continued)

Table 8

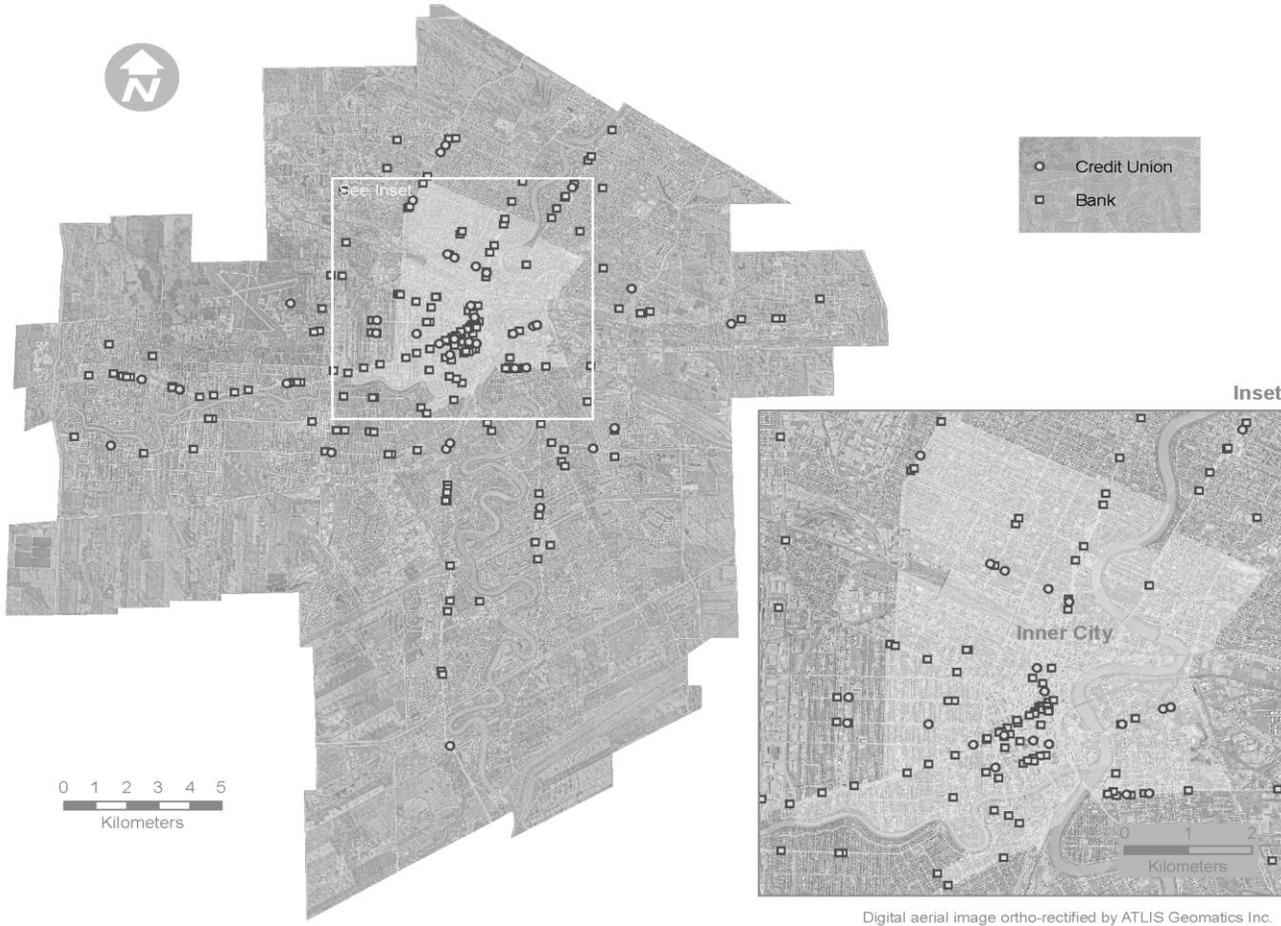
Modeling Results Predicting Number of Payday Loan Outlets, Bank and Credit Union Branches per Census Tract per 100 Population: Final Results

| Independent Variable | Dependent Variables | | | | | | | | |
|----------------------|--|-------|-------------------|----------------------------------|----------------------|----------------------|--|-------|---------------------|
| | Payday Loan Outlets Per Hundred Capita | | | Bank Branches Per Hundred Capita | | | Credit Union Branches Per Hundred Capita | | |
| | 2001 | 2006 | Pooled | 2001 | 2006 | Pooled | 2001 | 2006 | Pooled |
| Avg family size | - | - | - | - | - | -0.18*** (-2.47) | - | - | -.032*** (-5.65) |
| Avg hhld inc | - | - | - | - | -0.000*** (-4.27) | -0.000** (-3.56) | - | - | 0.000*** (4.51) |
| Median hhld inc | - | - | - | - | - | - | - | - | - |
| Lone parent | - | - | 0.001** (1.88) | - | -0.013*** (-3.86) | -0.004*** (-3.30) | - | - | - |
| No. of Obs | 169 | 169 | 338 | 169 | 169 | 338 | 169 | 169 | 338 |
| Adj R ² | 0.344 | 0.273 | 0.182 | 0.462 | 0.465 | 0.393 | 0.471 | 0.366 | 0.398 |

Note: T-statistics in parentheses

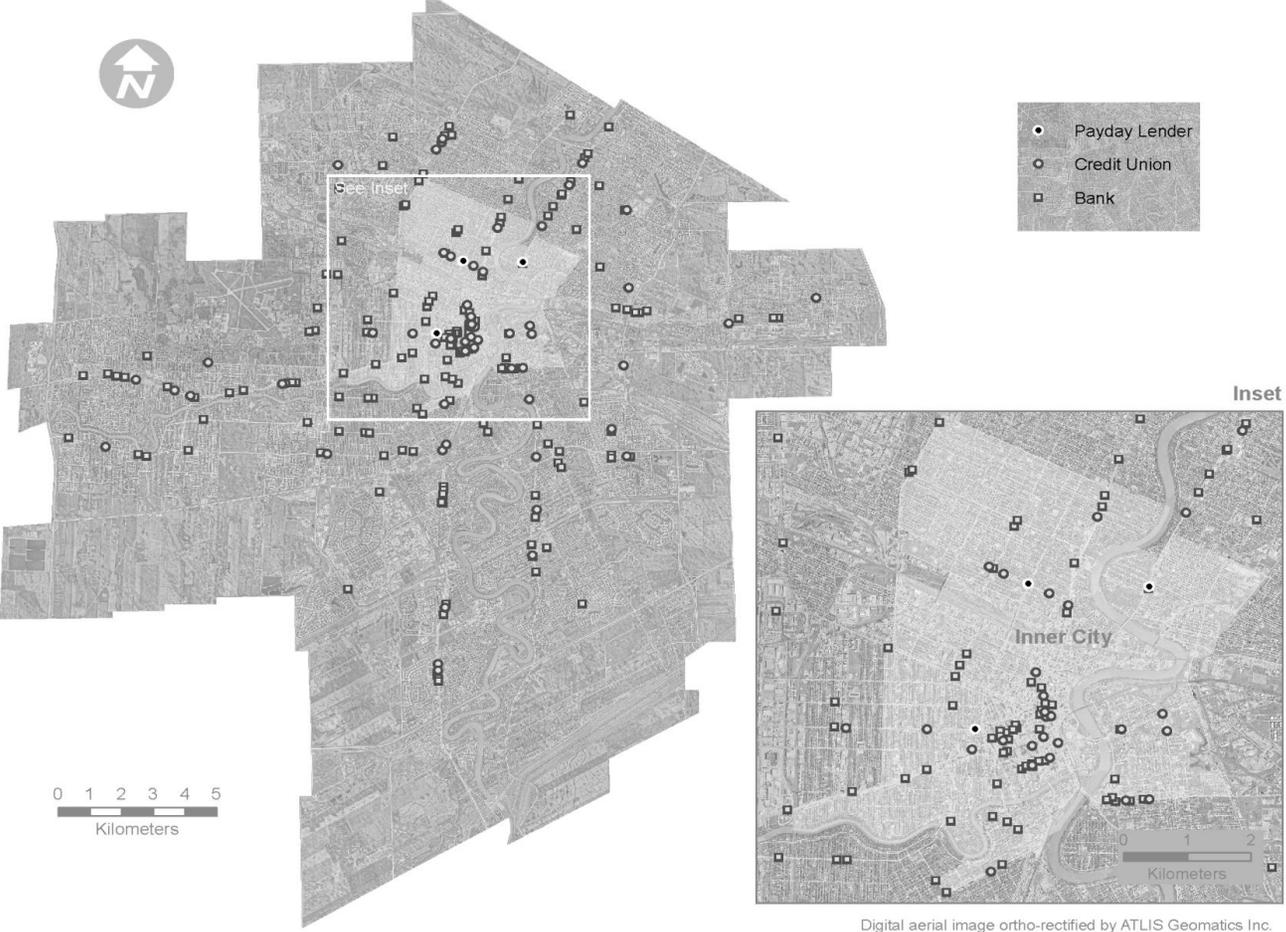
*p < .10. **p < .05. ***p < .01.

Figure 1. Banks and Credit Unions in Winnipeg–1985



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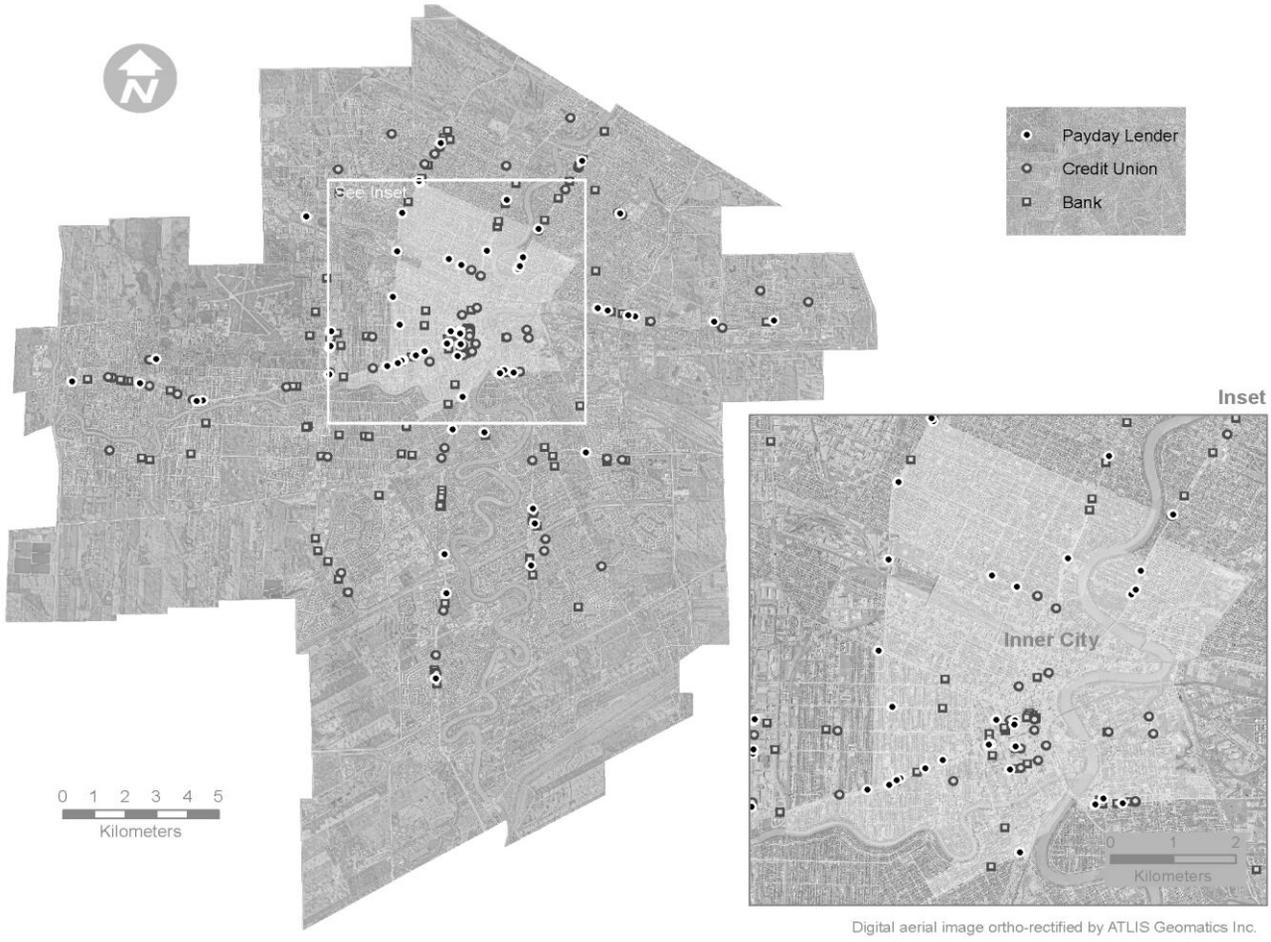
Figure 2. Banks, Credit Unions and Payday Lenders in Winnipeg–1995



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Figure 3. Banks, Credit Unions and Payday Lenders in Winnipeg–2009



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Figure 4. Banks, Credit Unions and Payday Lenders in Winnipeg–1988

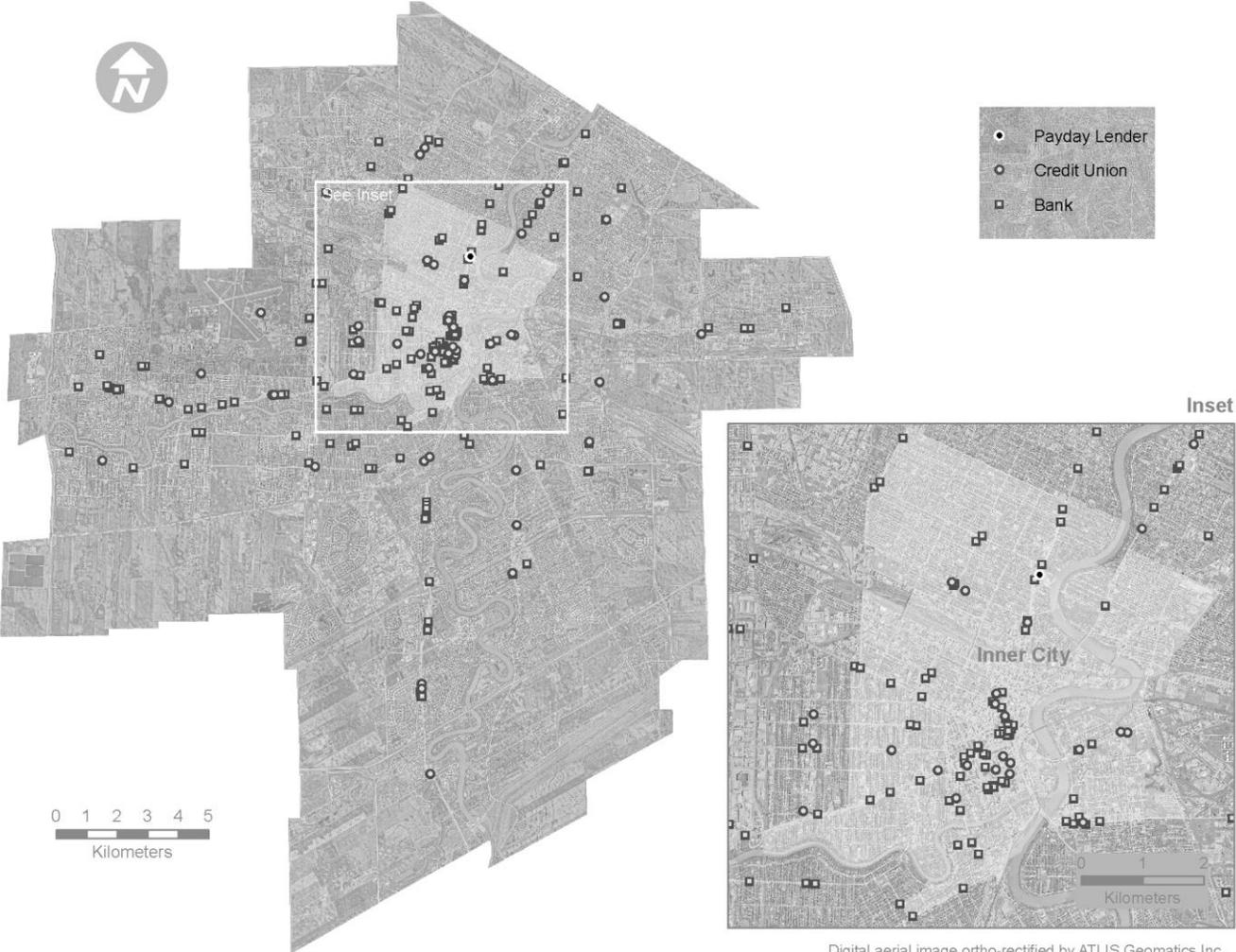
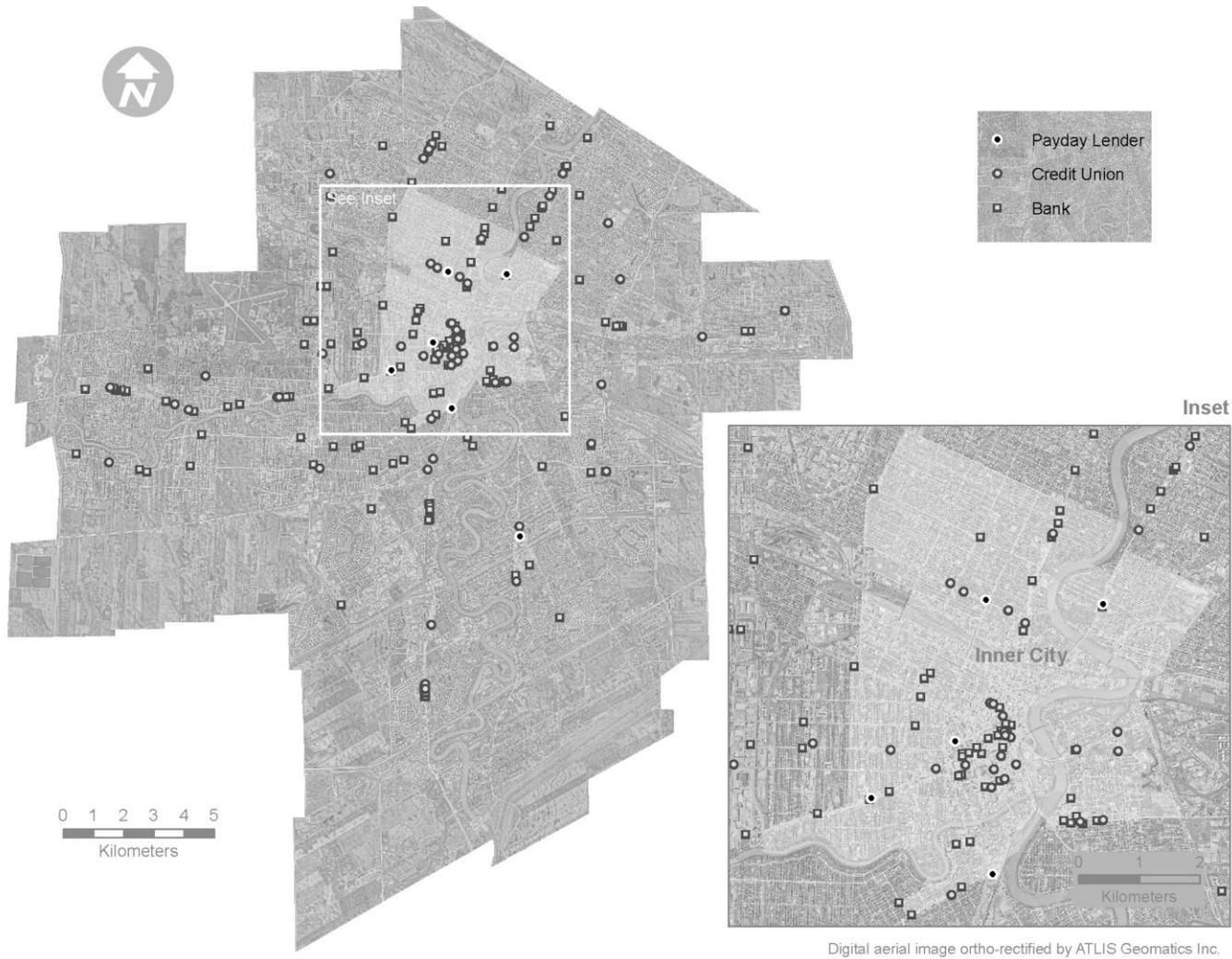


Figure 5. Banks, Credit Unions and Payday Lenders in Winnipeg–1999



Digital aerial image ortho-rectified by ATLAS Geomatics Inc.

Figure 6. Banks, Credit Unions and Payday Lenders in Rural Manitoba Communities–2004

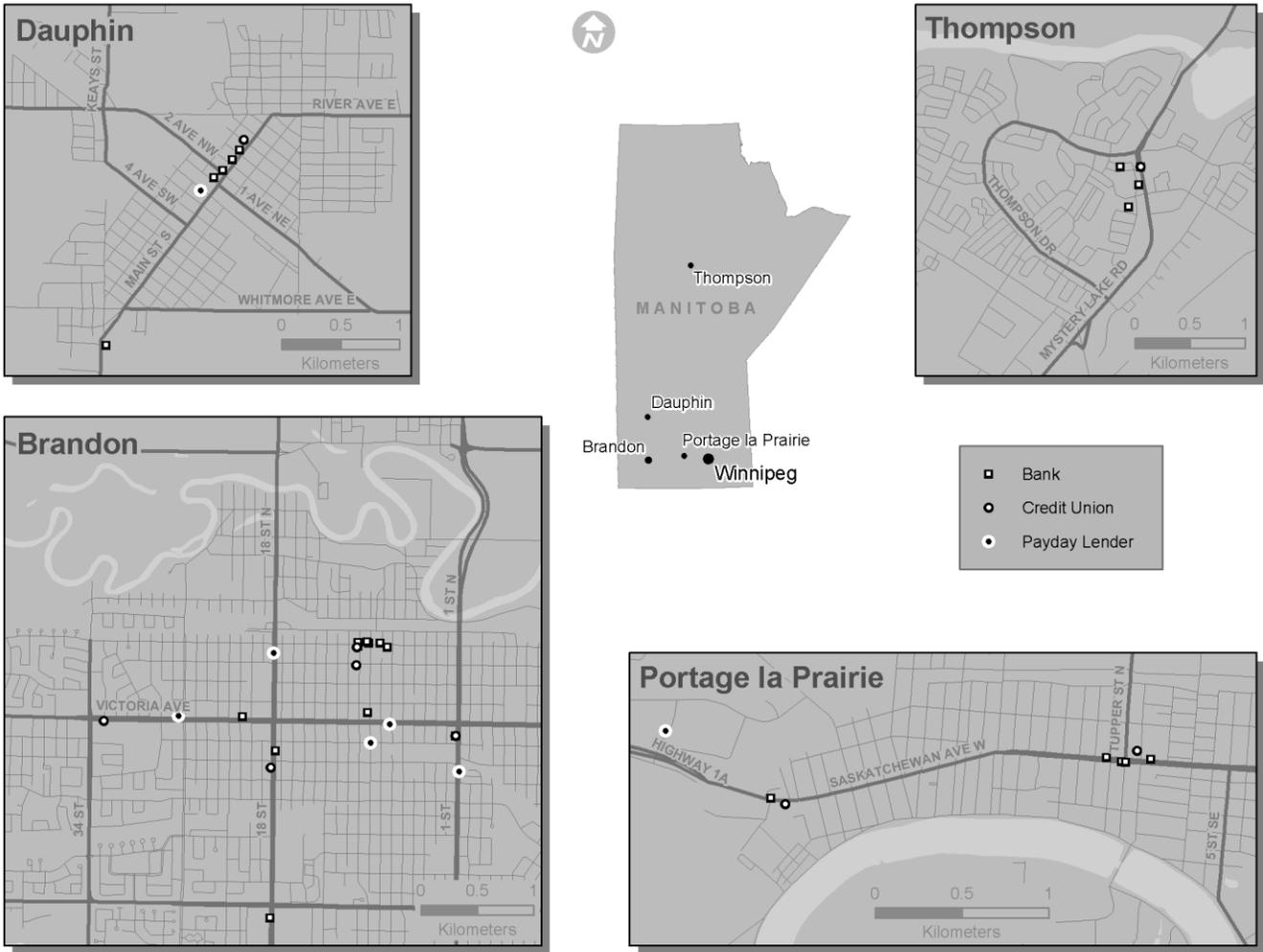


Figure 7. Banks, Credit Unions and Payday Lenders in Rural Manitoba Communities–2009

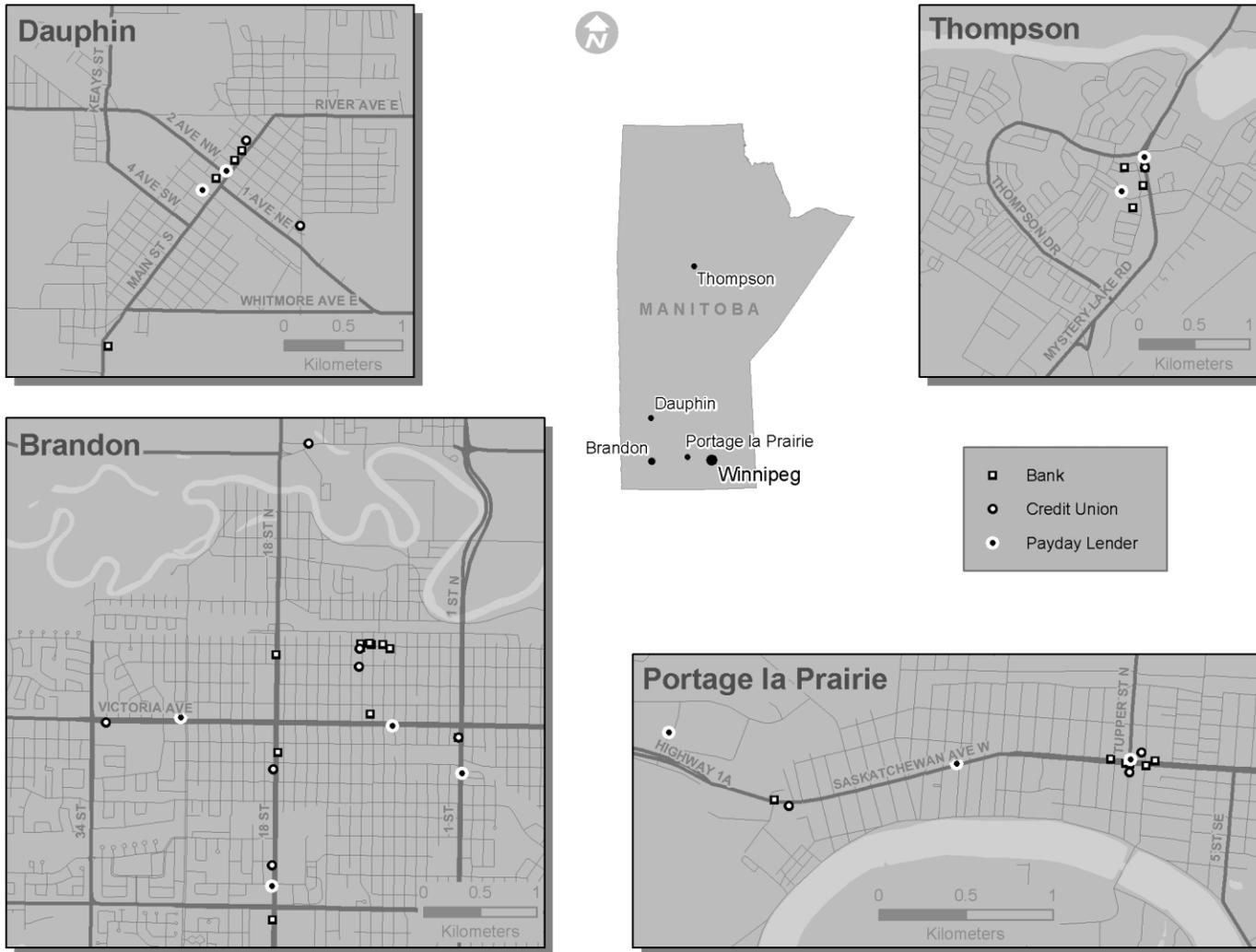
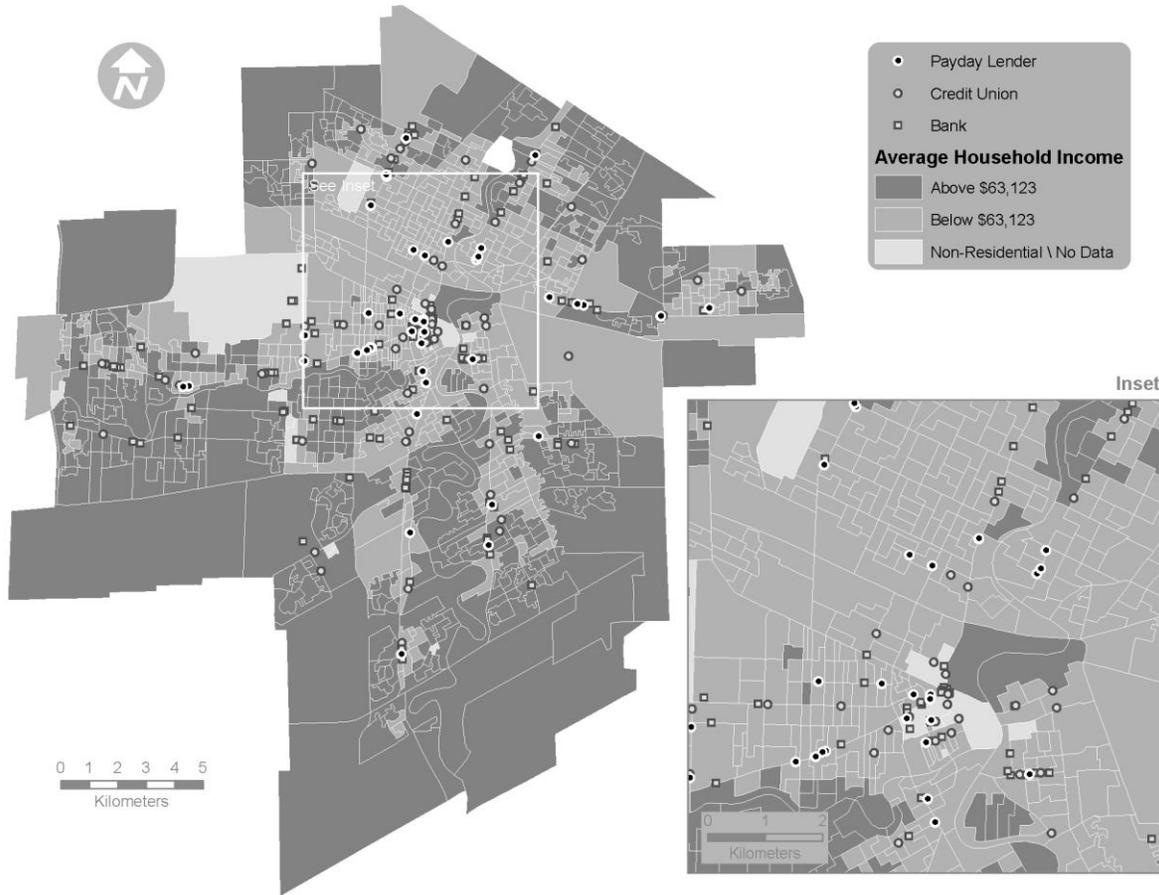


Figure 8. Banks, Credit Unions and Payday Lenders in Winnipeg Dissemination Areas with Above and Below Average Household Income—2005



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Appendix

Major Location Studies Integrating Spatial Void Hypothesis in the Financial Exclusion Literature

| Criteria | Caskey (1994) | Graves (2003) |
|-----------------------------|--|--|
| a. Theoretical foundation | Rational/institutional perspective | Rational/institutional perspective |
| b. Hypotheses tested | Two hypotheses that banks disproportionately closed branches in low-income, minority tracts | Three hypotheses relating payday lender and bank location patterns to differences in socioeconomic characteristics of census black-groups |
| c. Independent variables | Five variables: Tracts with: median household income < , > 67% of city average, > than 50% African Americans, > 40% Hispanic residents and <50 % African American and 40% Hispanic | Seven variables: % white, % black, median household income, % below poverty, % renter occupied at block-group level and median house value (1990 census) |
| d. Dependent variables | No. of FDIC-insured bank branches | No. of payday lenders, FDIC-insured banks |
| e. Measurement of variables | Change in bank representation from 1970 to 1989 relative to socioeconomic characteristics of tracts (1980 census) | Addresses of payday lenders, banks mapped. Neighbourhoods-each block-group within a quarter of a mile of any payday lender, bank |
| f. Research design | Spatial analysis of bank data in three time periods (1970, 1980 and 1989) in 5 US cities at CT level | Spatial study (seven parishes of Louisiana and in Cook County, Ill.) |
| g. Sample size | 1,000 to 1,400 bank branches located across census tracts of five major cities | 1,000 bank branches, 300 payday lender outlets, 4500 census block groups |

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| h. Analysis procedures | Cross-tabulation of distribution of bank branches | Two sample difference of means t-test |
| i. Major results | Bank branch closures disproportionately occurred in low-income, ethnic minority tracts in Atlanta and New York. But the data from Denver, San Jose and Washington are less supportive | Significant differences between payday lender and bank urban neighbourhoods when income, poverty and ethnic variables compared. Lack of significant statistical differences in small towns |
| j. Conclusions | The underrepresentation of bank branches in minority and some low-income urban communities may explain increased demand for fringe bank services in these communities. | Poor, ethnic minority neighbourhoods are simultaneously targeted by payday lenders and neglected by traditional banks. Lack of viable retail sites explains results in small towns |

(continued)

Major Location Studies Integrating Spatial Void Hypothesis in the Financial Exclusion Literature (continued)

| Criteria | Buckland & Martin (2003) | Temkin & Sawyer (2004) |
|-----------------------------|--|--|
| a. Theoretical foundation | Rational/institutional perspective | Rational/institutional perspective |
| b. Hypotheses tested | Fringe banks overrepresented and mainstream banks underrepresented in Winnipeg's North end (no statistical tests applied for purpose of study) | Three hypotheses relating location of banks and fringe banks to each other and differences in socioeconomic & regulatory profile of tracts |
| c. Independent variables | Socioeconomic indicators associated with Winnipeg inner-city neighbourhoods | Eight variables: % White, % Black, % Hispanic, % Asian, poverty rate and strength of regulatory environment (2000 census) |
| d. Dependent variables | No. of banks, credit unions, fringe banks (including pawn shops, cheque-cashers, payday lenders and rent-to-owns) | No. of FDIC-insured banks and fringe banks (including cheque-cashers, payday lenders and pawnshops) |
| e. Measurement of variables | Change in bank and fringe bank representation from 1980 to 2003 | Addresses of banks, fringe banks mapped. Neighbourhoods-census tracts |

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| f. Research design | Case analysis (Winnipeg's North end) | Spatial study(Chicago, Atlanta, Houston, Kansas, LA., Memphis, WA) |
| g. Sample size | Small sample based on population data in the inner-city | Sites include 3,082 fringe bank and 5,031 bank branches |
| h. Analysis procedures | Descriptive analysis of location data | Descriptive analysis of location data |
| i. Major results | No. of mainstream banks declined from 20 to five, no. of fringe banks grew from one to 18 during study period. | More fringe banks (and fewer banks) located in ethnic minority and low-income tracts, but not in geographic isolation of banks. Regulatory environment related to mix of fringe banks only |
| j. Conclusions | Low-income residents in Winnipeg's North end neighbourhoods have fewer options as well as reduced mobility affecting access to mainstream bank branch financial services | Residents of low-income, ethnic minority neighbourhoods do not rely on fringe banks because an area lacks mainstream banks. But fringe banks may be more attentive to needs. |

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Major Location Studies Integrating Spatial Void Hypothesis in the Financial Exclusion Literature (continued)

| Criteria | Burkey & Simkins (2004) | Apgar & Herbert (2004) |
|-----------------------------|---|---|
| a. Theoretical foundation | Rational/institutional perspective | Rational/institutional perspective |
| b. Hypotheses tested | Hypothesis relating payday lender & bank location patterns to differences in demographic, socioeconomic characteristics | Three hypotheses relating location of fringe banks & subprime lenders with race-ethnicity, income, credit risk, bank location |
| c. Independent variables | Eleven variables: GINI, % Hispanic, % White, % Black, education, med- income, % public assistance, % urban, % home, % married, age | Primary variables: racial, ethnic composition and income level, neighbourhood credit risk, bank branch presence |
| d. Dependent variables | No. of FDIC-insured banks, payday lenders | No. of FDIC-insured banks, and fringe banks (including cheque-cashers, payday lenders and pawnshops) |
| e. Measurement of variables | Addresses of banks, payday lenders geocoded for regression. Neighbourhoods-Zip code tabulation areas (ZCTA). Socioeconomic data (2000 census) | Addresses of fringe banks, subprime lenders and banks mapped. Neighbourhoods-Census tracts (2000 census) |
| f. Research design | Spatial Study (North Carolina) | Spatial study (Dallas metro market) |
| g. Sample size | No. of observations 760 | 696 census tracts, 846 banks, 365 fringe banks |
| h. Analysis procedures | Descriptive, negative binomial regression analysis | Descriptive, regression analysis |

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| i. Major results | Payday lender location negatively related with age, income, education, and public assistance but positively related with % black. Bank location positively related with age, education and negatively related with % Black | Fringe banks more densely located in lower-income areas, but not in areas devoid of banks. Location more strongly related to where immigrants live than where minorities generally found. Credit risk not significant. |
| j. Conclusions | ZCTAs with higher minority concentrations, younger populations, lower median incomes and lower education levels associated with higher no. of payday lenders and lower no. of banks | Results suggest fringe banks (when grouped together) are located in areas with a higher share of immigrant population, thought more likely to be unbanked. |

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Major Location Studies Integrating Spatial Void Hypothesis in the Financial Exclusion Literature (continued)

| Criteria | Jones, Bermingham, & Erguden (2005) | Fellowes & Mabanta (2007) |
|-----------------------------|--|--|
| a. Theoretical foundation | Not stated | Institutional theory of savings |
| b. Hypotheses tested | One hypothesis that payday lenders have located in areas not well served by traditional FIs. | One hypothesis that fringe banks have located in low-income areas uninhabited by mainstream banks |
| c. Independent variables | Bank, credit union and trust company location | Income levels (1999) |
| d. Dependent variables | Payday lender location | No. of FDIC-insured banks, and fringe banks (including cheque-cashers, payday lenders and pawnshops) |
| e. Measurement of variables | Distance bands of 250, 500, 1000, 1500, 2000, 3000 m drawn around location of payday lenders to determine proximity of FIs | Addresses of banks, fringe banks mapped as of 2006. Neighbourhoods-US census tracts |
| f. Research design | Spatial study (Toronto, Vancouver, Winnipeg and Halifax) | Spatial study (nationwide US) |
| g. Sample size | Census tracts across four Canadian cities | All US state census tracts, 108,000 mainstream and 48,000 fringe banks |

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| h. Analysis procedures | Distance band analysis | Distance band analysis, descriptive analysis |
| i. Major results | In each of four cities, more than 50% of payday lenders found within 250 m of FIs, and more than 90 % found within 1000 m. Nearly 100% found within 1500 m. | Over 90% of fringe banks located within one mile of a bank or credit union. Mainstream banks located in 56% of lower-income areas vs 31% of fringe banks |
| j. Conclusions | Payday lenders are not serving an infilling location strategy. Consumers have good access to other FIs in areas where payday lenders are found | Access to mainstream banks not segregated but equitable across neighbourhoods of all income levels. FI network can be leveraged to tailor products, promote savings of low-income pop |

Major Location Studies Integrating Spatial Void Hypothesis in the Financial Exclusion Literature (continued)

| Criteria | Buckland et. al (2007) | Leyshon, Signoretta, & French (2008) |
|-----------------------------|--|---|
| a. Theoretical foundation | Rational/institutional perspective | Rational/institutional perspective |
| b. Hypotheses tested | One hypothesis that payday lenders are largely operating in low-income neighbourhoods of socially & economically vulnerable residents | One hypothesis that poor neighbourhoods in Britain affected most by changing geography of bank & building society closure (1995-2003) |
| c. Independent variables | Six variables: income (median, incidence of low-income, >30% income on shelter), education <grade 12, ethnicity (Aboriginal, Visible Minority) | Index of multiple deprivation data (ward level) based on socioeconomic characteristics & geodemographic super-groups (census wards) |
| d. Dependent variables | Payday lender location | Bank & building society branch location (Four largest banks, 10 largest recently converted & 10 largest existing building societies) |
| e. Measurement of variables | Address of payday lenders in Winnipeg & Manitoba mapped. Neighborhoods-neighborhood profile level (census 2006) | Location data geocoded and mapped. Neighbourhoods-ward and census ward level (census 2001) |
| f. Research design | Spatial study (Winnipeg, Manitoba) | Spatial study (Britain) |
| g. Sample size | 26 neighbourhood profiles (Winnipeg), 69 payday loan outlets (51 in Wpg, 18 outside of Wpg) | Between 12,000 and 14,000 branches, over 8,400 wards. |

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| h. Analysis procedures | Descriptive analysis | Descriptive analysis |
| i. Major results | No statistical methods applied. Maps show payday lenders more densely located in areas with lower income, lower education and higher percentage of ethnic minorities | Banks closed 36% of branches; building society branches declined 17 to 22%. Highest closure rates in metro areas that include lower-income inner cities. Lowest in suburbs & small towns |
| j. Conclusions | Mapping payday lenders in Wpg demonstrated a bias in locating in inner-city and poorer suburban over suburban and higher-income areas | Net change in branch networks has generally been greatest in more deprived and ethnically diverse areas and lowest in more affluent ones |

Major Location Studies Integrating Spatial Void Hypothesis in the Financial Exclusion Literature (continued)

| Criteria | Smith, Smith, & Wackes (2008) | Damar (2009) |
|-----------------------------|---|--|
| a. Theoretical foundation | Rational/institutional perspective | Market entry theory (firm will enter market if it expects to realize non-negative net profits) |
| b. Hypotheses tested | Two hypothesis relating fringe bank location to low-income, ethnic minority markets & where traditional banking services are under-provided | Four hypotheses testing market entry decisions of payday lenders for evidence supporting spatial void hypothesis or change of strategy |
| c. Independent variables | Variables include family income, % White, % Black, % Hispanic (2000 census data) | Four categories: market characteristics (socioeconomic, demographic), bank presence, market-specific costs, market-firm specific cost |
| d. Dependent variables | FDIC-insured banks and fringe banks (cheque-cashers and pawnbrokers only) | Entry decisions of payday lenders (2002-2004) |
| e. Measurement of variables | Location data mapped. Neighbourhoods-US census blocks of four Pennsylvania counties. | 233 ZCTAs constitute set of entry decisions for each of 54 payday lending firms opening a new branch in one or more ZCTAs |
| f. Research design | Spatial study (Philadelphia, Allegheny, Delaware, Montgomery) | Spatial study (Oregon) |
| g. Sample size | 3, 928 census blocks, 1,339 bank branches, 333 fringe banks (2005 data) | 128 entry decisions, 233 ZCTAs |

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| h. Analysis procedures | k-function (Monte Carlo testing procedures) | Fixed-effects (conditional) logit regression |
| i. Major results | Neighbourhoods served by cheque-cashers and pawnshops characterized by over-representation of lower-income, higher ethnic minorities and fewer bank branches per capita | Payday lenders more likely to enter markets with more bank branches, larger populations and higher percentages of Hispanics |
| j. Conclusions | Empirical support for the spatial void hypothesis in the Philadelphia region | Despite their initial relationships to mainstream financial institutions, payday lenders have started to serve markets that are also served by banks, suggesting evolution of market strategy |

Major Location Studies Integrating Spatial Void Hypothesis in the Financial Exclusion Literature (continued)

| Criteria | Prager (2009) | Cover, Fuhrman, & Kleit (2011) |
|-----------------------------|---|---|
| a. Theoretical foundation | Rational/institutional | Rational/institutional |
| b. Hypotheses tested | Hypothesis equation estimated separately for each type of fringe bank (payday lenders, pawnshops, check cashers), for both urban & rural counties | One (spatial void) hypothesis that fringe banks concentrate in lower income, high ethnic minority counties that lack mainstream banks |
| c. Independent variables | Thirteen variables: Hispanic, Black, Asian, age, education, poverty, no, low, medium credit score, pop density, rate ceiling, prohibited, no. banks | Twelve variables: Including change in no. banks 2007-2004, No. banks, % poor, working poor, college, Black, Hispanic, active military |
| d. Dependent variables | No. of fringe banks (pawnshops, cheque-cashers, payday lenders) per million capita | No. of fringe banks (pawnshops, cheque-cashers, payday lenders) per capita in urban, mixed-urban & rural counties |
| e. Measurement of variables | US county-level data (2006). Census data 2000. | US county-level data. Census data (2000, 2004). Fringe bank data (2009), bank location data (2007) |
| f. Research design | Spatial study (nationwide US) | Spatial study (nationwide US) |
| g. Sample size | No. of observations ranging from 795-1906 by fringe bank type (rural, urban) | 3,109 counties, 34,908 fringe banks |

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| h. Analysis procedures | OLS multiple regression analysis | OLS (urban), fixed effects Tobit(mixed, rural) |
| i. Major results | Payday lender location positive association: no. of banks, no, low credit rating, % Black, no high school, < age 40, pop density (rural). Negative: low poverty level, % Hispanic, low rate caps | Fringe banks tend to be located in urban, poorer places with more minorities but not necessarily within metro areas. There are more banks, not fewer, in counties with more fringe banks. |
| j. Conclusions | No. of fringe banks per capita significantly related to demographic characteristics of county population (racial-ethnic, age, education), credit risk & stringency of fringe bank laws & regulation | Study does not disprove spatial void hypothesis as originally formulated to explain differences between neighbourhoods (in cities). But not validated at the scale of counties or rural areas |